

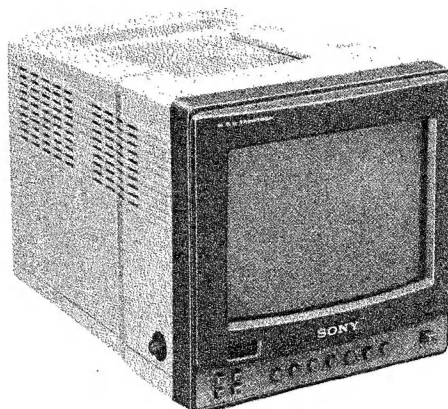
PVM-8020

VF-501

SERVICE MANUAL

US Model

Chassis No. SCC-629A-A



March, 1985

SPECIFICATIONS

Color system	NTSC system
Picture tube	Microblack Trinitron tube 8-inch picture measured diagonally, 70-degree deflection
Resolution	230 TV lines (B/W)
Color temperature	9300° K
Frequency response	4 MHz (-3 dB)
Horizontal linearity	± 8 %
Vertical linearity	± 8 %
Line pull range	Horizontal ± 500 Hz Vertical 8 Hz
Overscan of the picture	6 %
Underscan of the picture	5 %
H/V delay	Horizontal: Approx. 1/4 line Vertical: Approx. 1/2 line
Return loss	5 MHz, -30 dB (INPUT A, INPUT B)
Zooming	Within 3 %
Convergence	Central area 0.5 mm Periphery 0.7 mm
Brightness	More than 50 foot-lamberts

Inputs

VIDEO IN (INPUT A): BNC connector
VIDEO (INPUT B): BNC connector
Composite 1V p-p ± 6 dB,
75 ohms, unbalanced, sync negative

AUDIO IN (INPUT A): minijack
AUDIO (INPUT B): minijack
-5 dBs, 47 k ohms or more

Outputs

VIDEO OUT (INPUT A): BNC connector
VIDEO (INPUT B): BNC connector
1 V p-p, 75 ohms, unbalanced,
sync negative

AUDIO OUT (INPUT A): minijack
AUDIO (INPUT B): minijack
Output level 0.8 W

TUNER connector

6-pin DIN connector
Pin No. 1: not in use
Pin No. 2: video input, composite
1 V p-p ± 6 dB, 75 ohms,
unbalanced, sync negative
Pin No. 3: ground
Pin No. 4: audio input, -5 dBs,
47 k ohms or more
Pin No. 5: power output
Pin No. 6: not in use



TRINITRON®
COLOR VIDEO MONITOR
SONY®

MON

PVM-8020

VF-501

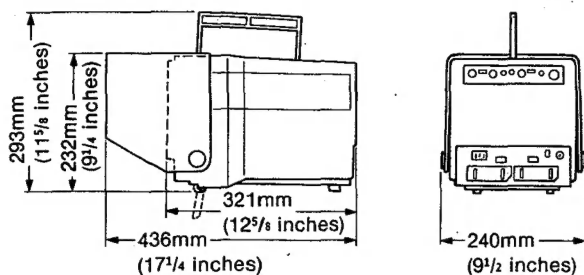
Power requirements

120 V ac, 50/60 Hz
12 V dc, with the optional Sony
NP-1 battery pack or 12 V car bat-
tery using the optional DCC-16AW
car battery cord

Power consumption

47 W ac, max.
38 W dc, max.

Dimensions



Weight

Approx. 7.2 kg (15 lb 14 oz)
not incl. accessories

Accessories supplied

AC power cord (1)
Hood (1)

Design and specifications subject to change without
notice.

OPTIONAL ACCESSORIES

TV tuner unit TU-1110

Battery pack NP-1


Car battery cord DCC-16AW

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WARNING !!

AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS. THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

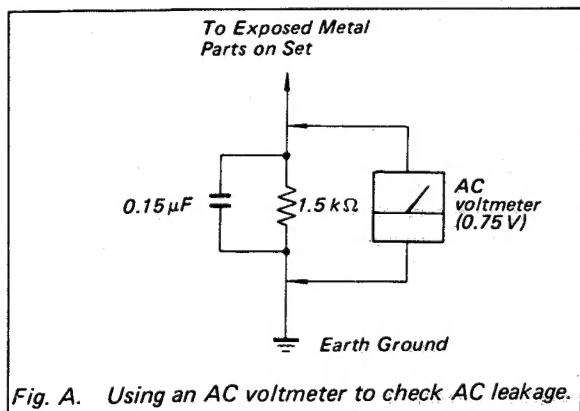
SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY SHADING AND MARK  ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY. CIRCUIT ADJUSTMENTS THAT ARE CRITICAL TO SAFE OPERATION ARE IDENTIFIED IN THIS MANUAL. FOLLOW THESE PROCEDURES WHENEVER CRITICAL COMPONENTS ARE REPLACED OR IMPROPER OPERATION IS SUSPECTED.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
3. Check that all control knobs, shields, covers, ground straps, and mounting hardware have been replaced. Be absolutely certain that you have replaced all the insulators.
4. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
5. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
6. Check the line cord for cracks and abrasion. Recommend the replacement of any such line cord to the customer.
7. Check the condition of the monopole antenna (if any).
Make sure the end is not broken off, and has the plastic cap on it. Point out the danger of impalement on a broken antenna to the customer, and recommend the antenna's replacement.
8. Check the B+ and HV to see they are at the values specified. Make sure your instruments are accurate; be suspicious of your HV meter if sets always have low HV.
9. Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.



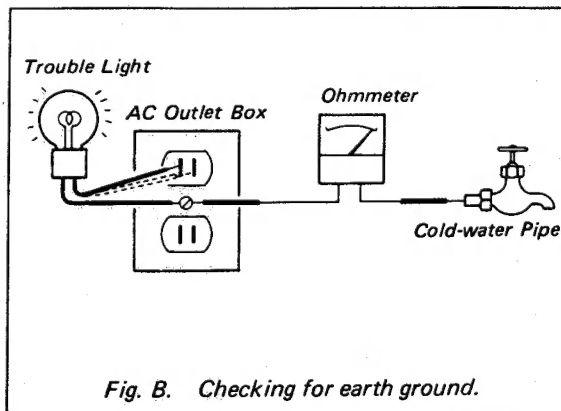
LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

HOW TO FIND A GOOD EARTH GROUND

A cold-water pipe is guaranteed earth ground; the cover-plate retaining screw on most AC outlet boxes is also at earth ground. If the retaining screw is to be used as your earth-ground, verify that it is at ground by measuring the resistance between it and a cold-water pipe with an ohmmeter. The reading should be zero ohms. If a cold-water pipe is not accessible, connect a 60-100 watts trouble light (not a neon lamp) between the hot side of the receptacle and the retaining screw. Try both slots, if necessary, to locate the hot side of the line, the lamp should light at normal brilliance if the screw is at ground potential. (See Fig. B)



SECTION 1 GENERAL

1-1. FEATURES

Microblack™ Trinitron® picture tube

The Microblack Trinitron picture tube gives a high resolution, high contrast picture.

Push-to-lock controls

In the locked position, the controls are protected from damage during carriage of the unit. The protruding position allows easier operation.

Monitor of sync signals

The HV-DELAY switch allows horizontal and vertical sync signals to be displayed on the screen.

Blue only picture

By using the B-ONLY switch, the picture can be displayed in blue and black only, facilitating hue adjustment or observation of VTR noise.

Underscan mode

The signal normally scanned outside of the screen can be monitored in the underscan mode.

6-pin DIN tuner connector

The TUNER connector allows easy connection of a TV tuner, which is equipped with the 6-pin DIN connector, using a single cable.

Three power sources

The monitor can operate on either house current, a rechargeable battery or a 12 V car battery, allowing use indoors or outdoors. The battery charge function is incorporated.

1-2. PRECAUTIONS

On safety

- Operate the unit only on 120 V ac or 12 V dc.

For ac operation, use only the supplied ac power cord. Do not use any other type.

For battery operation, use only the optional NP-1 battery pack. Do not use any other batteries.

For car battery operation, use only the optional DCC-16AW car battery cord. Do not use any other car battery cord.

- Should any liquid or solid object fall into the cabinet, unplug the unit and have it checked by qualified personnel before operating it any further.

- Unplug the unit from the wall outlet if it is not to be used for several days.

- To disconnect the ac power cord, pull it out by the plug. Never pull the cord itself.

On installation

- Allow adequate air circulation to prevent internal heat build-up.

Do not place the unit on surfaces (rugs, blankets, etc.) or near materials (curtains, draperies) that may block the ventilation holes.

- Do not install the unit in a location near heat sources such as radiators or air ducts, or in a place subject to direct sunlight, excessive dust, mechanical vibration or shock.

On cleaning

To keep the unit looking brand-new, periodically clean it with a soft cloth. Stubborn stains may be removed with a cloth lightly dampened with a mild detergent solution. Never use strong solvents such as thinner or benzene, or abrasive cleansers since these will damage the cabinet. As a safety precaution, unplug the unit before cleaning it.

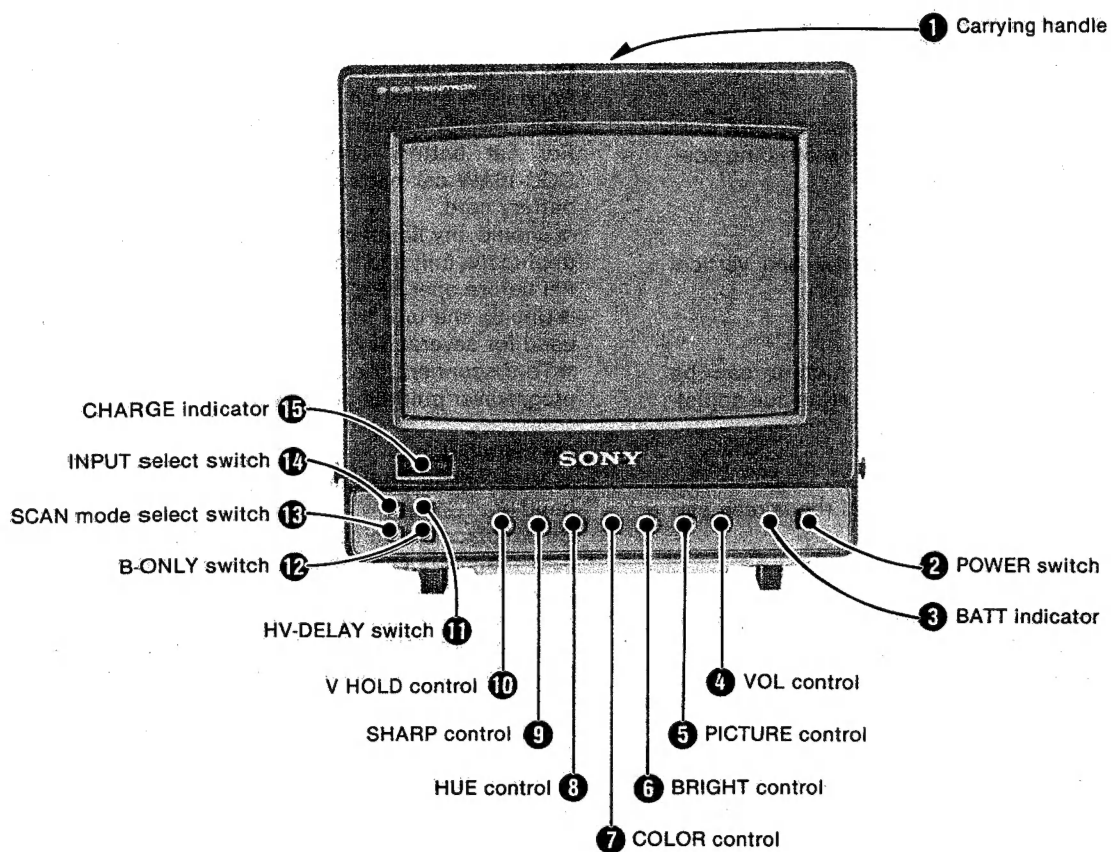
On repacking

Do not throw away the carton and packing materials. They make an ideal container in which to transport the unit. When shipping the unit to another location, repack it as illustrated on the carton.

If you have any questions about this unit, contact your authorized Sony dealer.

1-3. LOCATION AND FUNCTION OF CONTROLS

FRONT PANEL



① Carrying handle

② POWER switch

To turn the monitor on, depress the POWER switch (⬇ON). To turn it off, press the switch again (⬆OFF).

③ BATT (power/battery) indicator

This indicator lights when the power is turned on. When the rechargeable battery becomes weak, the indicator flashes for about five minutes. Then it goes out, and the power is automatically turned off.

④ VOL (volume) control

Turn this control clockwise or counterclockwise to obtain the desired volume.

⑤ PICTURE control

Adjusts the contrast, intensity and brightness simultaneously in the proper ratio.

⑥ BRIGHT (brightness) control

Adjusts the brightness. Normally set this control at the center detent position.

⑦ COLOR control

Adjusts the color intensity of the picture. Clockwise rotation makes the picture more vivid; counterclockwise rotation makes it paler.

⑧ HUE control

Use to obtain the most natural skin tones. Clockwise rotation makes the skin tones more greenish; counterclockwise rotation makes them more purplish.

⑨ SHARP (sharpness) control

Adjusts the sharpness of the picture. Clockwise rotation makes the picture sharper; counterclockwise rotation makes it softer.

⑩ V HOLD (vertical hold) control

If the picture rolls vertically, correct it with this control.

Before turning one of the controls ④ to ⑩, for easier operation press on it to release the control to a protruding position.

⑪ HV-DELAY switch

Normally keep this switch released (⬇NORM). To monitor the sync signals, depress the switch (⬇H/V). The picture is shifted horizontally and vertically. The horizontal sync is displayed in left approximately one quarter of the screen and the vertical sync is displayed near the center of the screen.

⑫ B-ONLY (blue only) switch

Normally keep this switch released (⬇NORM). Depress the switch (⬇BLUE) to turn off the red and green beams. The picture will be displayed in blue and black only. This facilitates hue adjustment or observation of VTR noise.

⑬ SCAN mode select switch

Keep this switch released (⬇NORM) for normal scanning. Depress the switch (⬇UNDER) to reduce the display size by about 5% (underscanning mode) and to view a picture which does not appear in normal scanning.

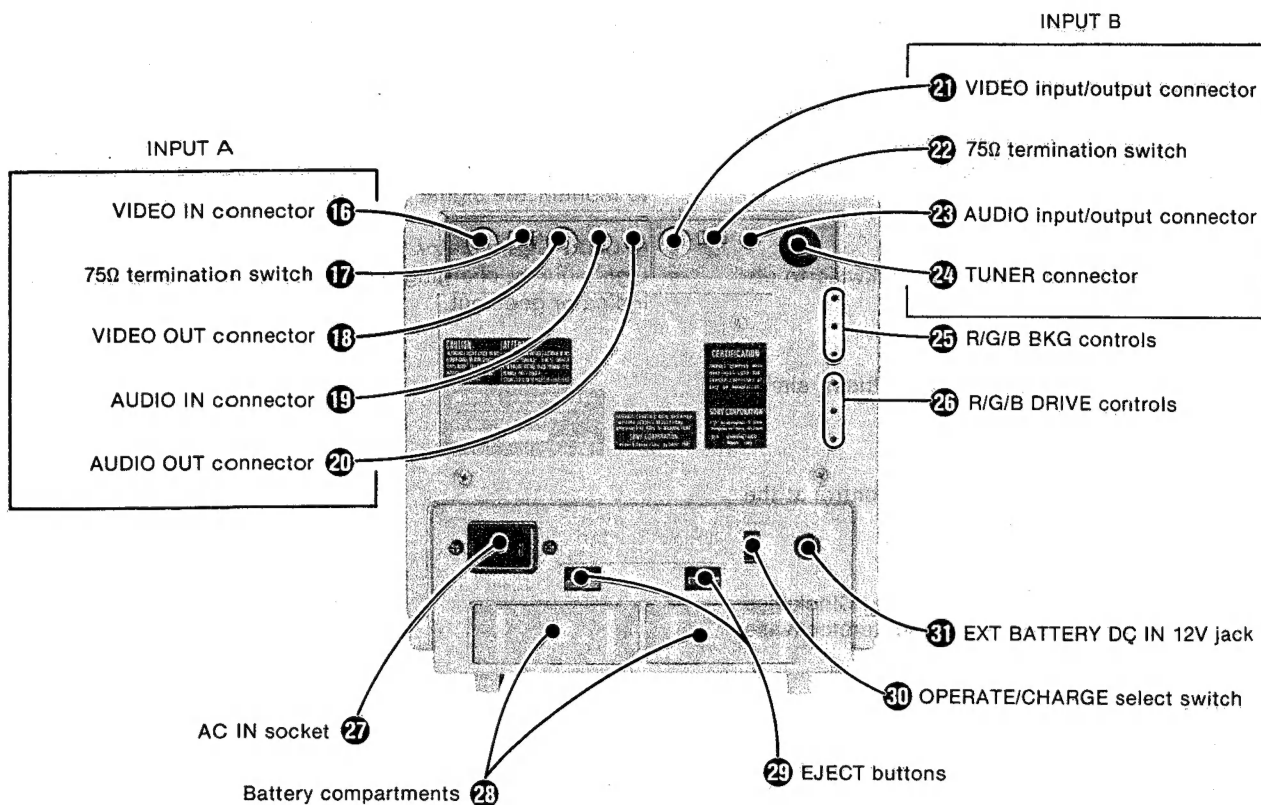
⑭ INPUT select switch

Keep this switch released (⬇A) to monitor the signal from the INPUT A connectors. Depress the switch (⬇B) to monitor the signal from the INPUT B connectors.

⑮ CHARGE indicator

Lights during charging. When charging is complete, the indicator goes out.

REAR PANEL



INPUT A

To monitor the input signals connected to these connectors, keep the INPUT select switch released (A).

16 VIDEO IN connector (BNC type)

Connect to the video output of video equipment, such as a VTR or a color video camera.

17 75Ω termination switch

When only the VIDEO IN connector is used (the VIDEO OUT connector is not used), set this switch to ON. When both the VIDEO IN and VIDEO OUT connectors are used together for a loop-through connection, set the switch to OFF.

18 VIDEO OUT connector (BNC type)

Loop-through output of the VIDEO IN connector. Connect to the video input of a VTR or another monitor.

19 AUDIO IN connector (minijack)

Connect to the audio output of a VTR or to a microphone (through a suitable microphone amplifier).

20 AUDIO OUT connector (minijack)

Loop-through output of the AUDIO IN connector. Connect to the audio input of a VTR or another monitor.

INPUT B

To monitor the input signals to these connectors, depress the INPUT select switch (B).

21 VIDEO input/output connector (BNC type)

Connect to the video output of a VTR or a color video camera.

When a TV tuner is connected to the TUNER connector and the 75Ω termination switch 22 is set to OFF, this connector can be used as a loop-through output of the TUNER connector. Connect to the video input of a VTR or another monitor.

22 75Ω termination switch

Normally set this switch to ON. When both the TUNER and VIDEO connectors are used together for a loop-through connection, set the switch to OFF.

23 AUDIO input/output connector (minijack)

Connect to the audio output of a VTR or to a microphone (through a suitable microphone amplifier).

When a TV tuner is connected to the TUNER connector and the 75Ω termination switch 22 is set to OFF, this connector can be used as a loop-through output of the TUNER connector. Connect to the audio input of a VTR or another monitor.

24 TUNER connector (6-pin DIN)

Connect to the 6-pin DIN connector of a TV tuner. The video and audio signals are supplied to the monitor and the power from the monitor is fed to the tuner using a single cable.

Note

The TUNER input and the VIDEO/AUDIO inputs 21, 23 cannot be used simultaneously. When connecting a TV tuner to the monitor, be sure to disconnect any input source equipment from the VIDEO and AUDIO connectors, or vice versa.

25 R/G/B BKG (background) controls

Used for adjusting the white balance of the background.

26 R/G/B DRIVE controls

Used for adjusting the white balance at the white peak.

27 AC IN socket

Connect the supplied ac power cord.

28 Battery compartments

Insert the NP-1 battery pack.

29 EJECT buttons

Press the EJECT button upwards to remove the battery pack.

30 OPERATE/CHARGE select switch

Normally set this switch to OPERATE. To charge the battery pack, set to CHARGE. The CHARGE indicator on the front panel lights. When charging is complete, the CHARGE indicator goes out; reset the switch to OPERATE.

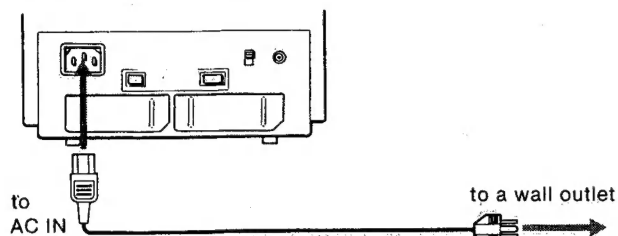
31 EXT BATTERY (external battery) DC IN 12 V jack

Connect the optional DCC-16AW car battery cord.

1-4. POWER SOURCES

HOUSE CURRENT

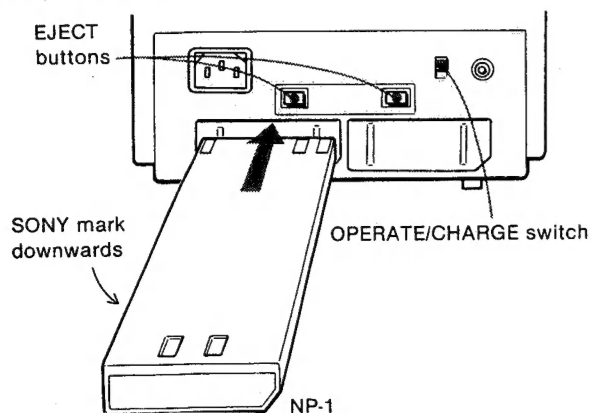
Connect the supplied ac power cord to the AC IN socket and to a wall outlet (120 V ac).



When the ac power cord is plugged into the AC IN socket, the battery pack (if installed) or the car battery (if connected) is automatically disconnected.

RECHARGEABLE BATTERY

Insert the Sony NP-1 battery pack (optional) into the battery compartment as illustrated. The monitor can operate with one or two battery packs. For extended use, two battery packs are recommended.



To remove the battery pack, press the EJECT button upwards.

Note

Make sure that the ac power cord and the car battery cord are disconnected from the monitor. Otherwise, the monitor cannot operate on the battery pack(s).

Caution

Do not use any other batteries than the NP-1, even if any can be inserted into the compartment.

Charging the battery pack

Before using the monitor, be sure to fully charge the battery pack. The charging time is about 6 hours at normal temperatures.

- 1 Connect the supplied ac power cord to the AC IN socket and then to a wall outlet.
- 2 Insert the battery pack(s) into the battery compartment(s).
- 3 Set the OPERATE/CHARGE switch to CHARGE.
- 4 Depress the POWER switch. The CHARGE indicator lights and charging begins.

When charging is complete, the CHARGE indicator goes out. Be sure to reset the OPERATE/CHARGE switch to OPERATE.

When the OPERATE/CHARGE switch is set to CHARGE, the picture cannot be monitored.

• For quicker charging, use the optional BC-1WA battery charger for NP-1.

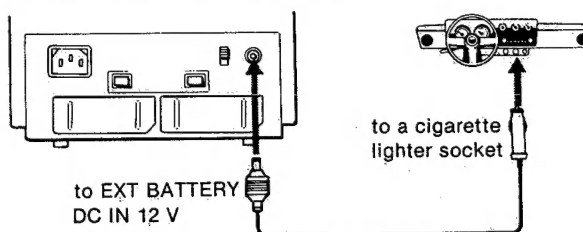
Battery life

At normal temperatures, the picture can be monitored continuously for about 60 minutes using two battery packs and operating the TV tuner connected to the monitor. When the TV tuner is not used, longer battery life can be expected (about 75 to 80 minutes).

When the battery is exhausted, the green BATT indicator flashes for about five minutes, and then the power is turned off automatically to prevent excessive battery discharge. When the BATT indicator goes off, press the POWER switch and replace the exhausted battery pack(s) with fully charged one(s), or use another power source.

CAR BATTERY

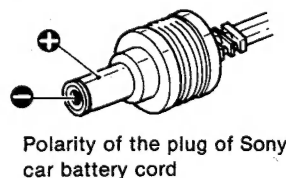
Use the Sony DCC-16AW car battery cord (optional) for a 12 V car battery. Connect the car battery cord to the EXT BATTERY DC IN 12 V jack and to the cigarette lighter socket of a car. For further details, read the instruction manual of the car battery cord.



When the car battery cord is plugged into the EXT BATTERY DC IN 12 V jack, the battery pack (if installed) is disconnected automatically.

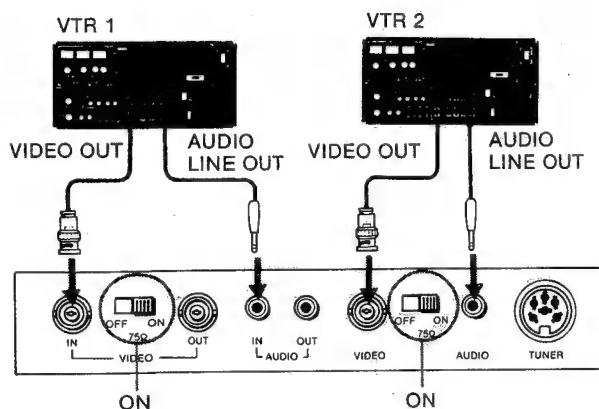
Note

Use only the recommended car battery cord manufactured by Sony. Polarity of the plugs of other manufacturers may be different.

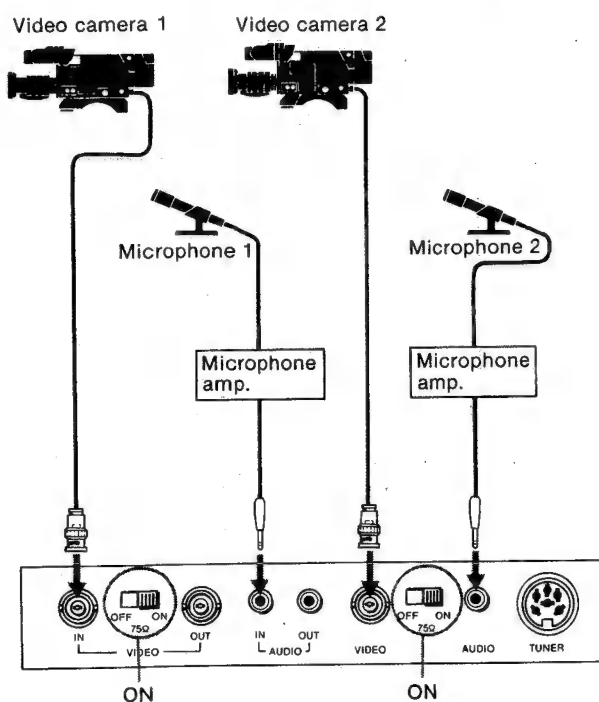


1-5. SYSTEM CONNECTIONS

CONNECTING A VTR

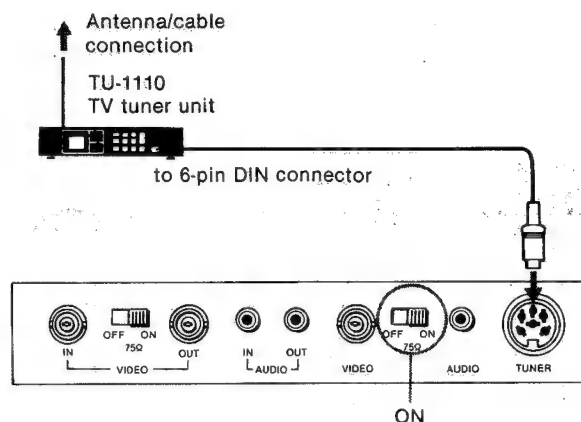


CONNECTING A CAMERA AND A MICROPHONE



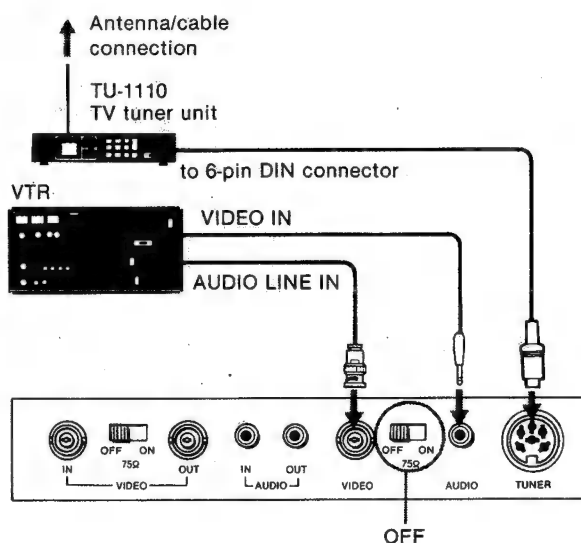
CONNECTING A TV TUNER

The Sony TU-1110 TV tuner unit, which is provided with a 6-pin DIN connector, can be connected to the monitor.



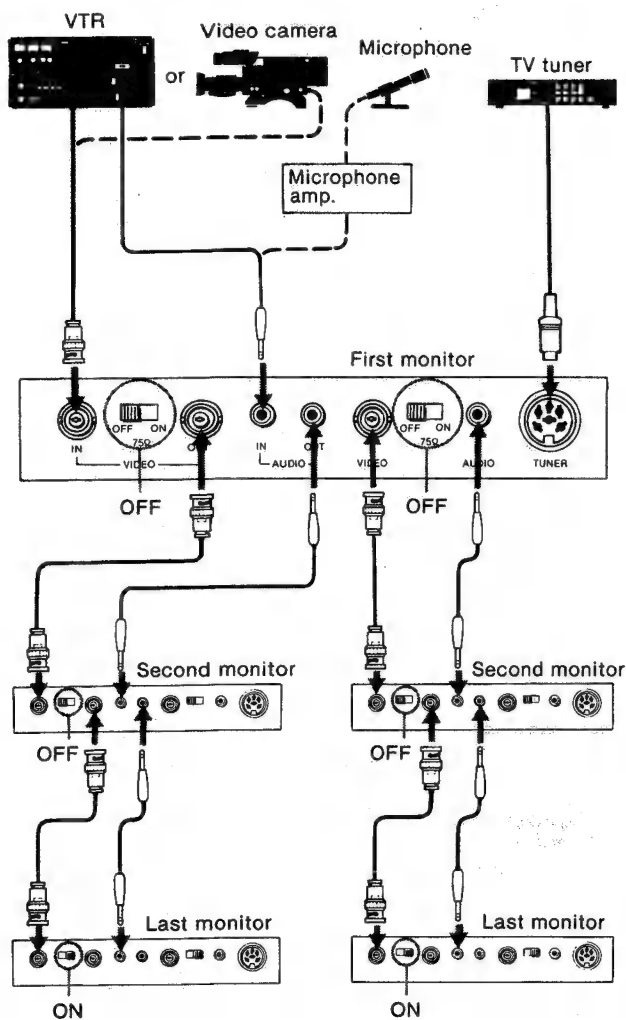
CONNECTING A TV TUNER AND A VTR

The VIDEO and AUDIO connectors of INPUT B can be used as loop-through outputs of the TUNER connector. By making the following connection, TV programs received by the TV tuner can be recorded on a VTR while monitoring the picture.

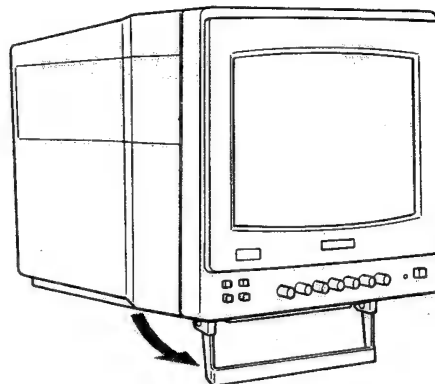


CONNECTING SEVERAL MONITORS

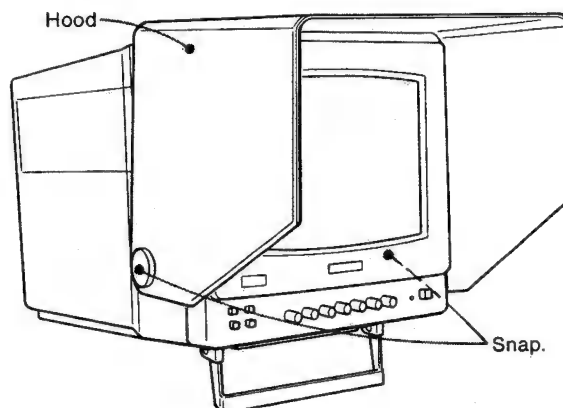
A loop-through connection is convenient for monitoring the same signal on several monitors. Use the VIDEO OUT and AUDIO OUT connectors of INPUT A, and for the TV tuner, use the VIDEO and AUDIO connectors of INPUT B. Up to 10 monitors can be connected for each group. Set the 75Ω termination switch of the last monitor to ON and those of the other monitors to OFF.



1-6. USE OF THE STAND

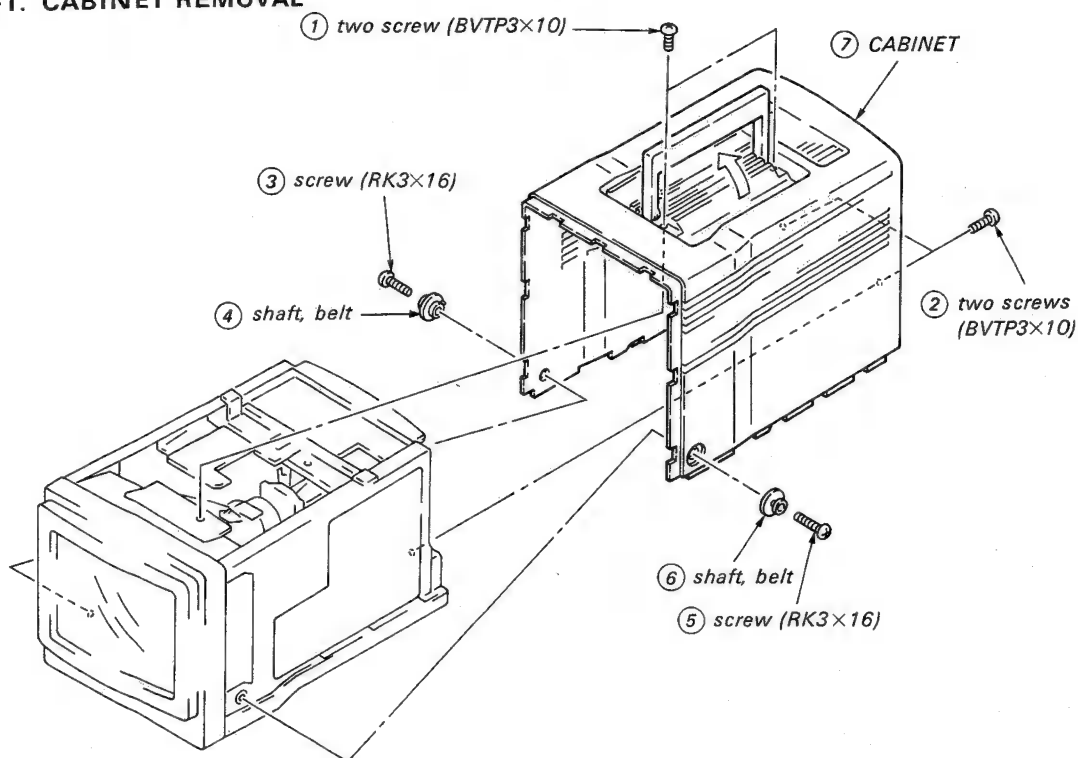


1-7. ATTACHING THE SUPPLIED HOOD

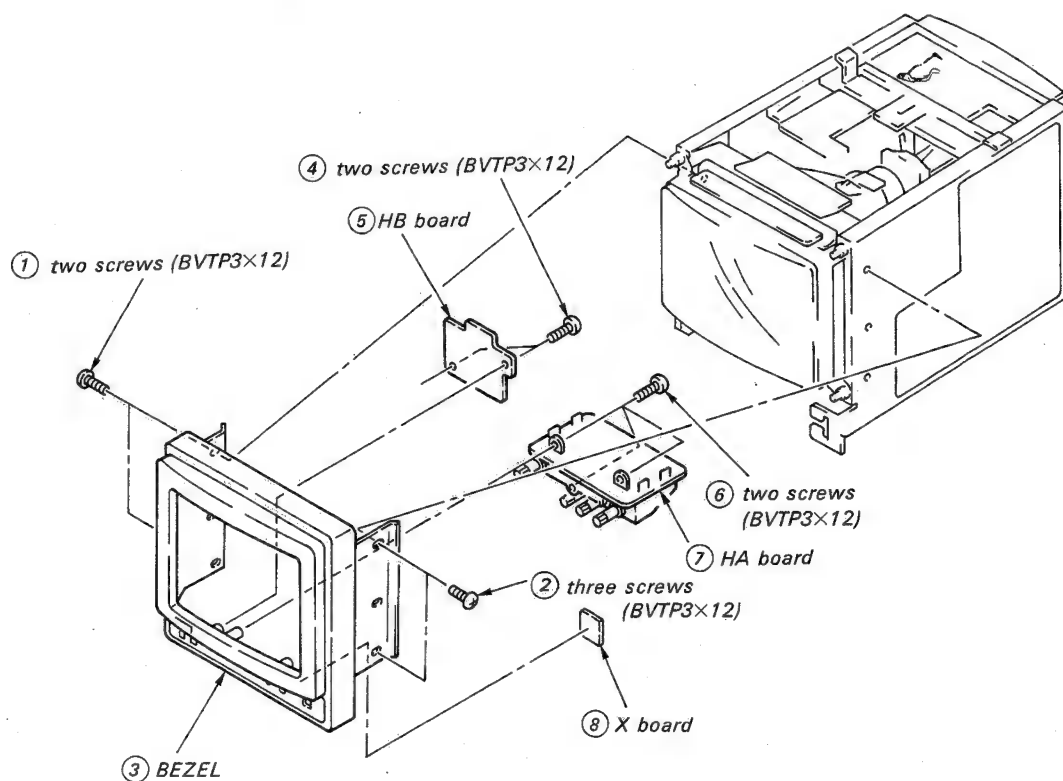


SECTION 2 DISASSEMBLY

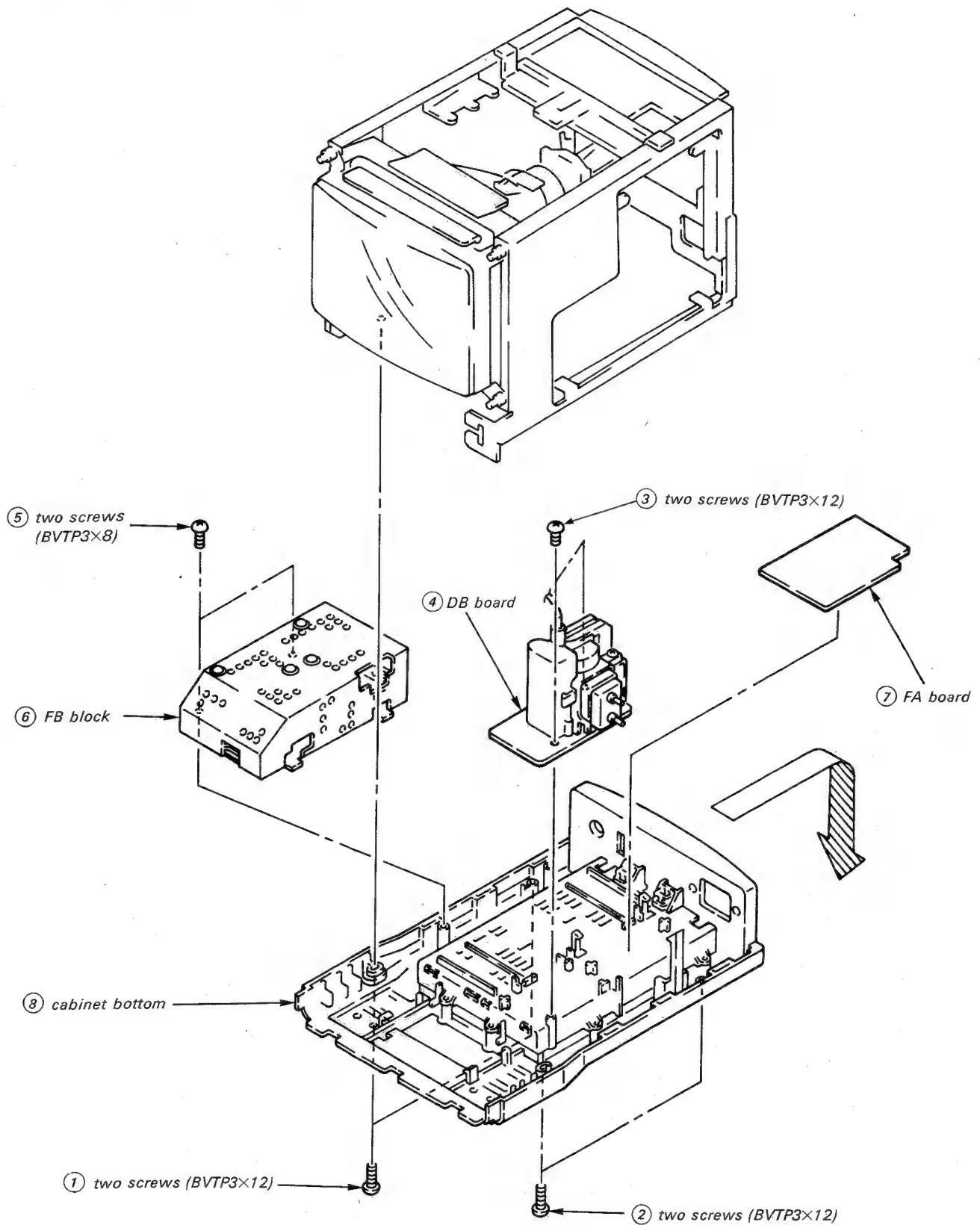
2-1. CABINET REMOVAL



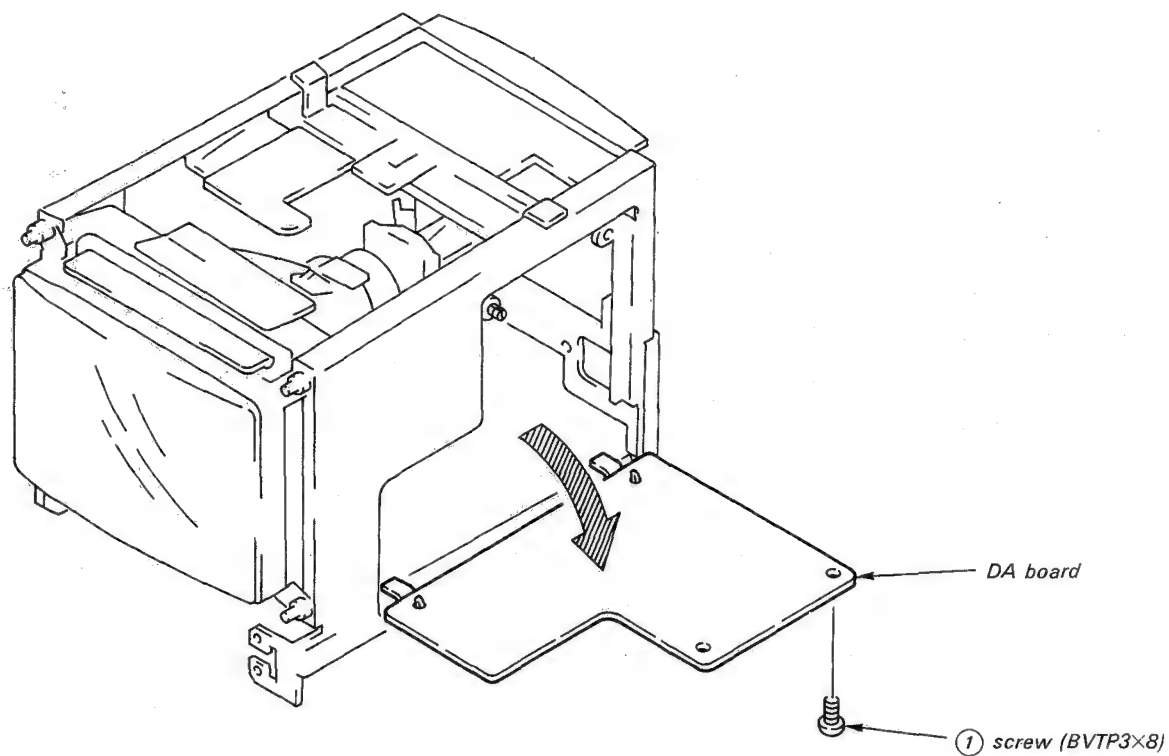
2-2. BEZEL REMOVAL (HA, HB, X BOARD)



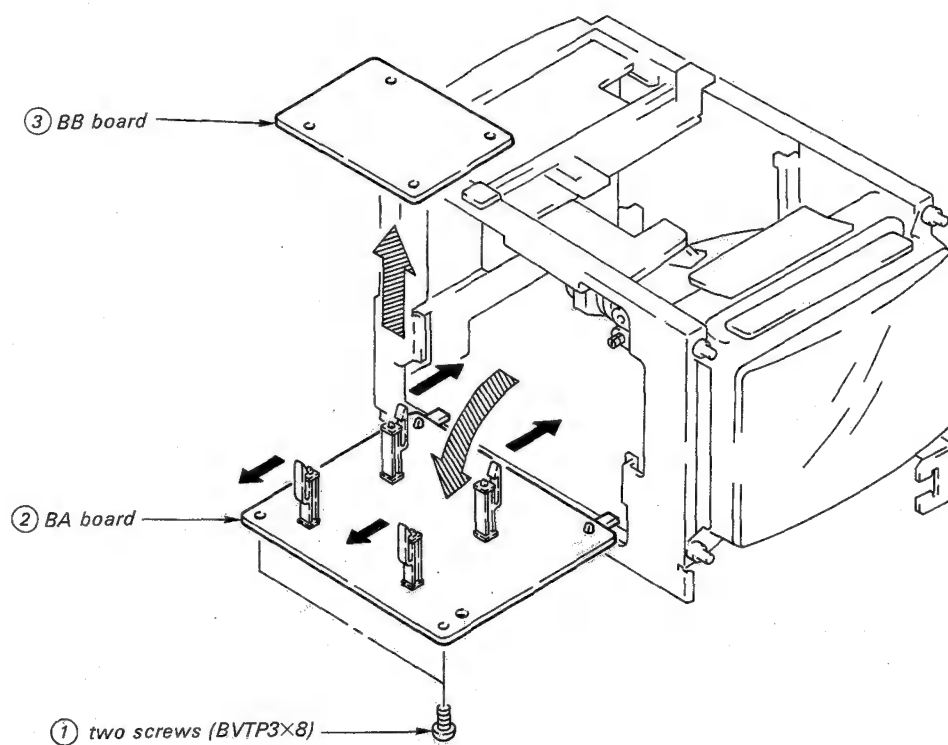
2-3. CABINET BOTTOM REMOVAL



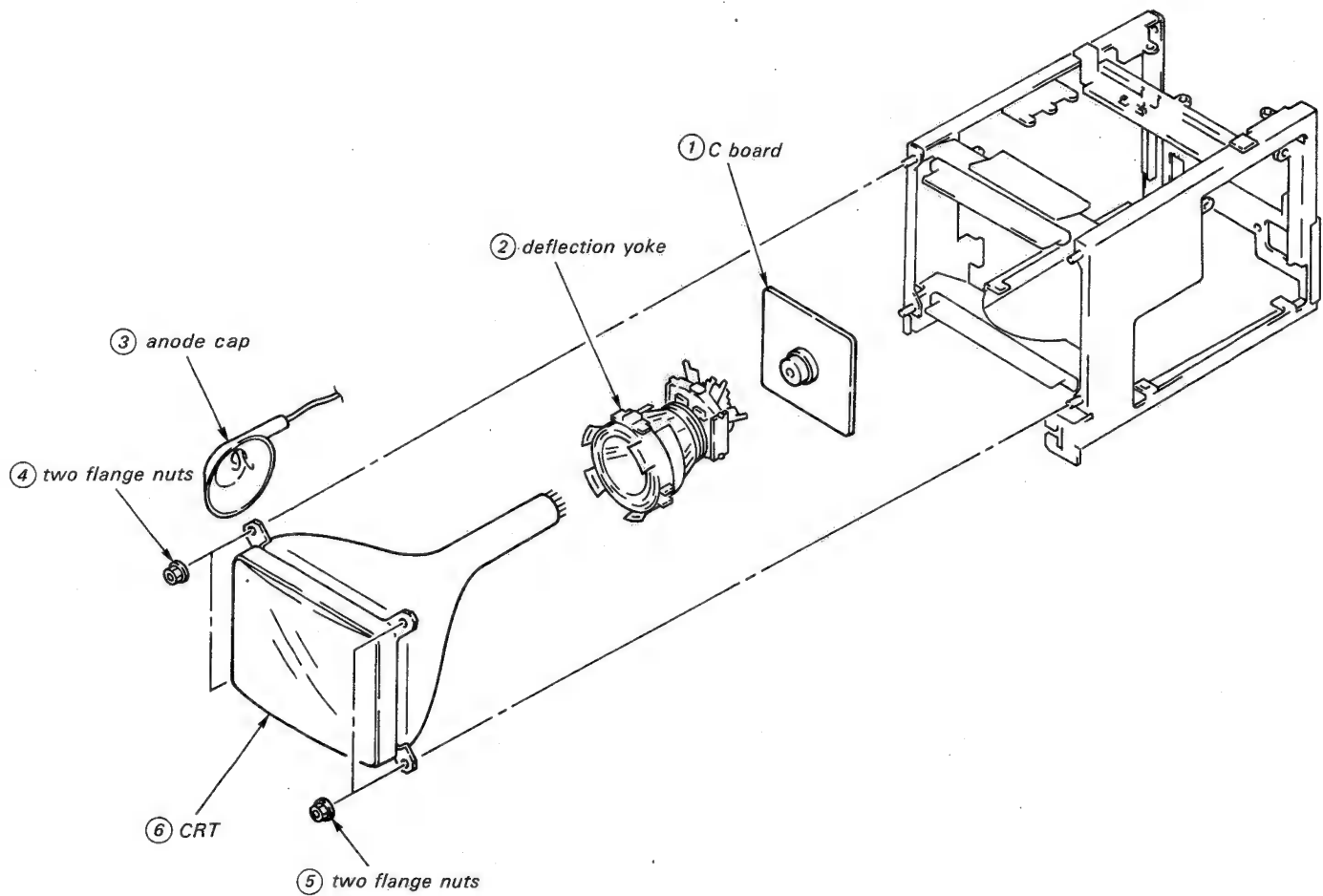
2-4. DA BOARD REMOVAL



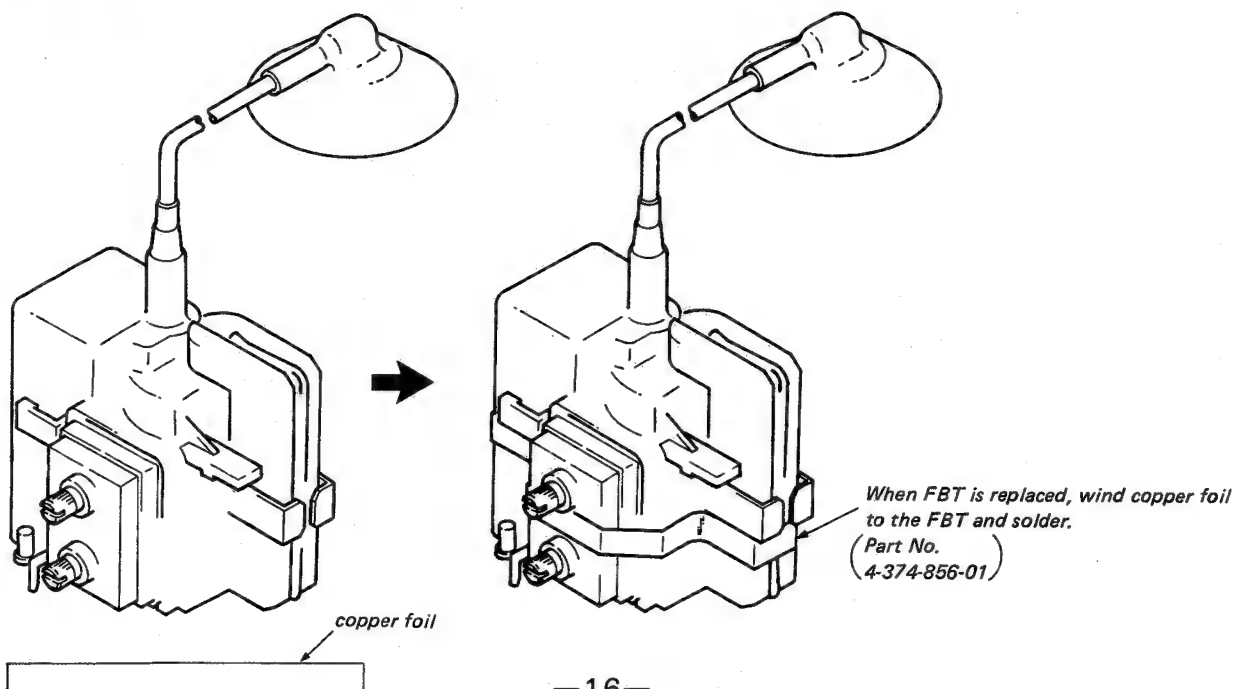
2-5. BA, BB BOARD REMOVAL



2-6. CRT REMOVAL



2-7. REPLACING FBT



SECTION 3 SET-UP ADJUSTMENTS

The following adjustments should be made when a complete realignment is required or a new picture tube is installed.

Controls and switch should be set as follows unless otherwise noted:

BRT, CONTR controls fully clockwise

Make the following adjustments in the order as follows given:

- 3-1. Beam Landing
- 3-2. Focus Adjustment
- 3-3. Convergence
- 3-4. White Balance

Note: Test Equipment Required

1. Color-bar/pattern generator
2. Degausser

3-1. BEAM LANDING

Preparation:

- Before starting, degauss the entire screen.
- 1. Loosen deflection yoke screw.
- 2. Remove deflection yoke spacers.
- 3. Adjust purity control to center the slide between two projections as shown in Fig. 1-1.
- 4. Slide deflection yoke as far forward as it will go.
- 5. Turn RED CUT OFF VR (RV259) MAX and GREEN (RV261) and BLUE CUT OFF RV (RV263) MIN.
- 6. Turn purity control to center vertical red band as shown in Fig. 1-2.
- 7. Slide deflection yoke back for a uniform red screen.
- 8. Check green and blue rasters for uniformity. Repeat the steps 6, 7 and 8.
- 9. Turn all CUT OFF VR (RV259, 261, 263) for mechanical CENTER.
- 10. Install the deflection yoke spacers.
- 11. Tighten the deflection yoke screw.
- 12. Check if mislanding appears at corners a-d as shown in Fig. 1-3. If mislanding is observed, correct it as shown in Fig. 1-4.

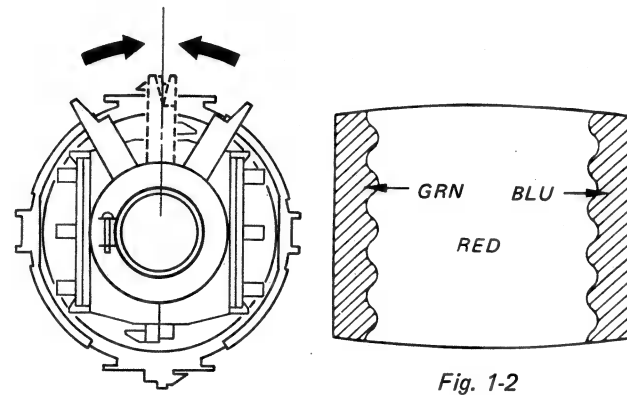


Fig. 1-1

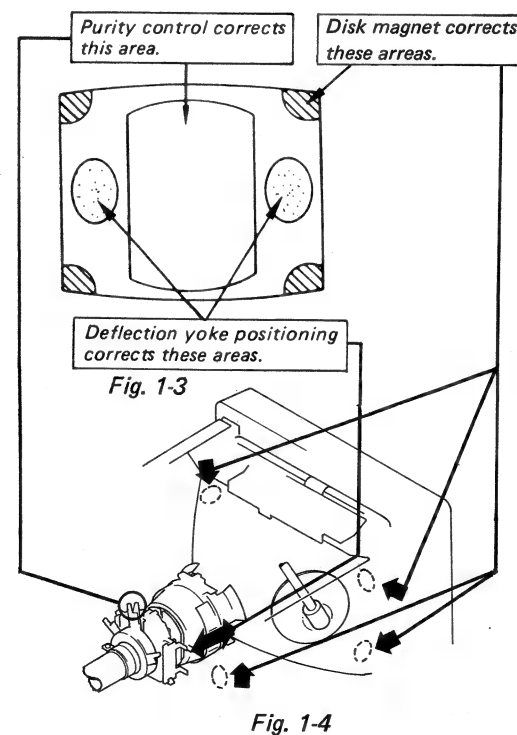
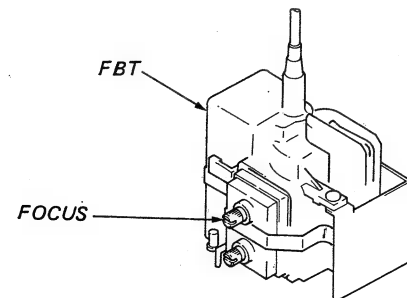


Fig. 1-4



3-3. CONVERGENCE

Preparation:

- Before starting, make FOCUS, H.SIZE, V.SIZE and V.LIN adjustments.
- Turn BRT control fully counterclockwise.
- Feed in the dot pattern.

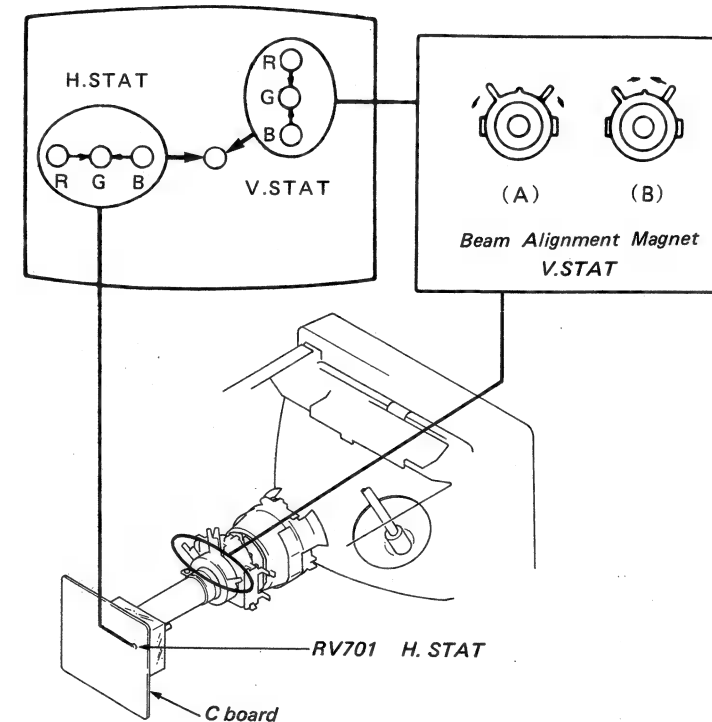
- (1) Horizontal Static Convergence and Vertical Static Convergence

If blue dot does not coincide with red and green dots,

Move BMC magnet to correct insufficient H.Static convergence.

Rotate BMC magnet to correct insufficient V.static convergence.

In either case, repeat Beam Landing Adjustment.

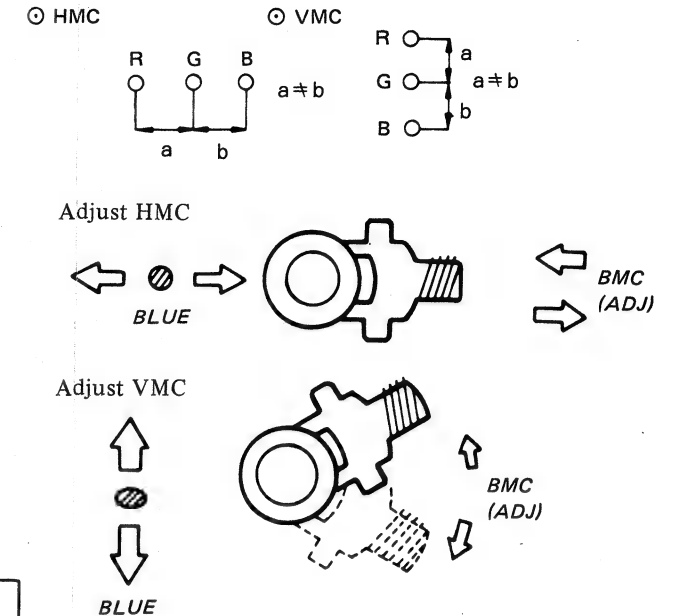
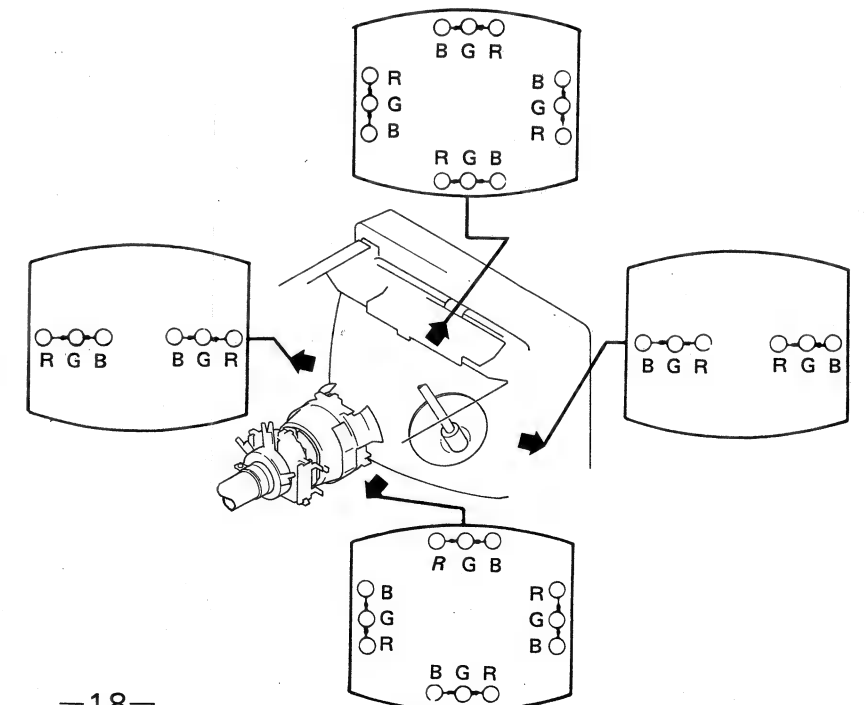


- (2) Dynamic Convergence Adjustment

Preparation:

- Before starting, perform Horizontal and Vertical Static Convergence Adjustment.

1. Loosen deflection yoke screw.
2. Remove deflection yoke spacers.
3. Move the deflection yoke for best convergence as shown below.
4. Tighten the deflection yoke screw.
5. Install the deflection yoke spacers.



3-3. CONVERGENCE

Preparation:

- Before starting, make FOCUS, H.SIZE, V.SIZE and V.LIN adjustments.
- Turn BRT control fully counterclockwise.
- Feed in the dot pattern.

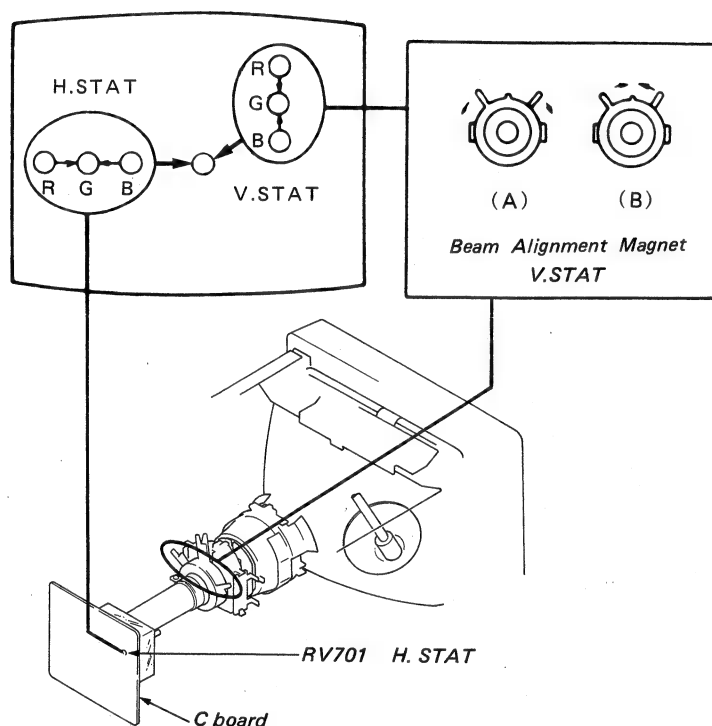
(1) Horizontal Static Convergence and Vertical Static Convergence

If blue dot does not coincide with red and green dots,

Move BMC magnet to correct insufficient H.Static convergence.

Rotate BMC magnet to correct insufficient V.static convergence.

In either case, repeat Beam Landing Adjustment.

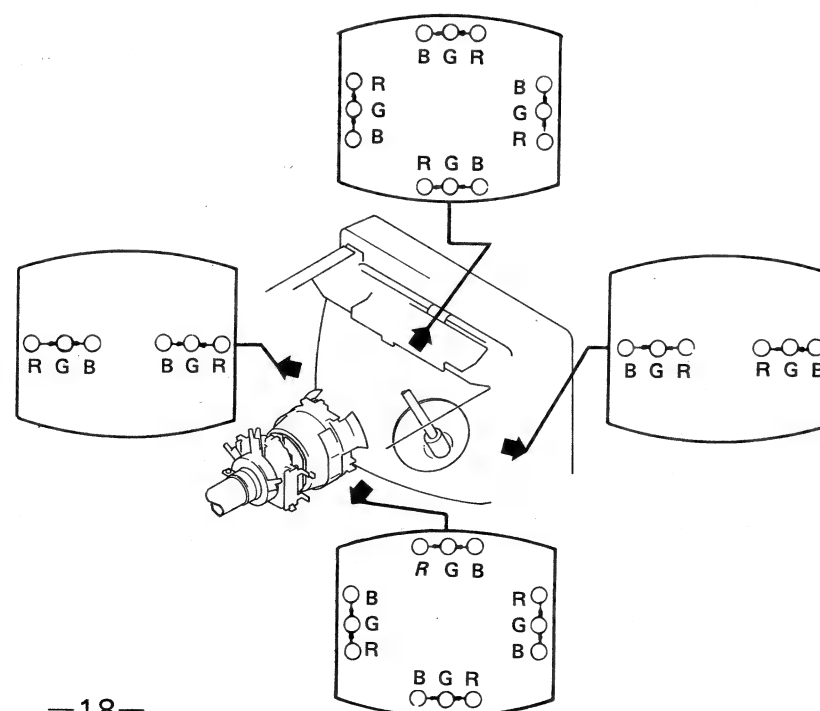


(2) Dynamic Convergence Adjustment

Preparation:

- Before starting, perform Horizontal and Vertical Static Convergence Adjustment.

- Loosen deflection yoke screw.
- Remove deflection yoke spacers.
- Move the deflection yoke for best convergence as shown below.
- Tighten the deflection yoke screw.
- Install the deflection yoke spacers.



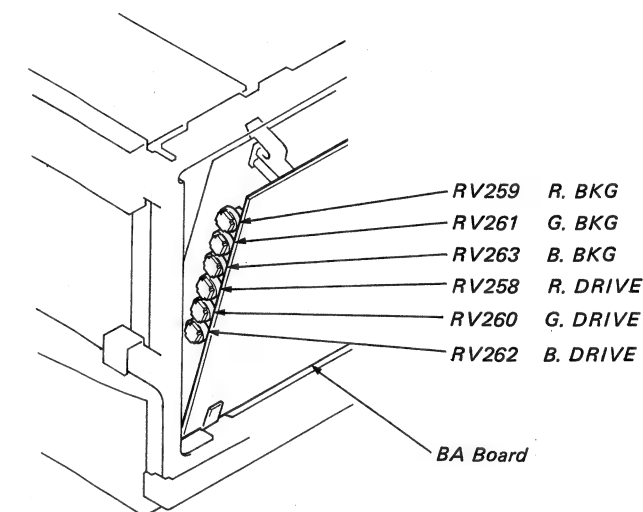
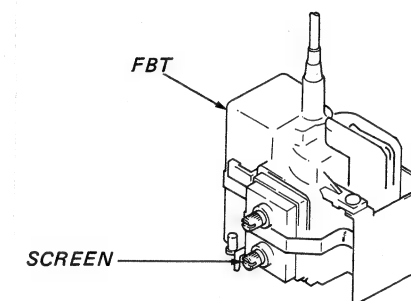
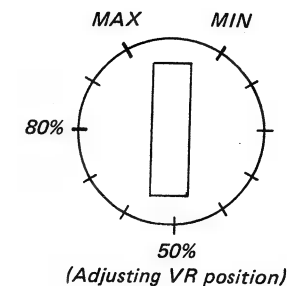
3-4. WHITE BALANCE

(1) SCREEN (G2)

- Input a dots pattern.
- Set the PICTURE control at minimum and turn the BRIGHT control fully counterclockwise.
- Confirm that BKG voltage is less than 105V dc when turning RV259 (R.BKG), RV261 (G.BKG) and RV263 (B.BKG).
- Note the color which becomes visible first when turning SCREEN VR.

(2) WHITE BALANCE

- Input a cross-hatch pattern.
- Set the PICTURE control to minimum and turn the BRIGHT control click position.
- Turn RV262 (B.DRIVE), RV260 (G.DRIVE) and RV258 (R.DRIVE) fully clockwise.
- Set RV259 (R.BKG), RV261 (G.BKG) and RV263 (B.BKG) to minimum.
- Turn RV509 (SUB BRT) slowly to obtain a faintly visible cross-hatch. Note the color that first becomes visible by turning. Do not turn a BKG control for this color.
- Adjust the other two BKG controls for best white balance (neutral gray) of the faint cross-hatch. Set the PICTURE control to maximum and turn the BRIGHT control fully clockwise. Observe the screen and adjust the DRIVE controls for best white balance.
- Repeat steps 1. through 6. several times.

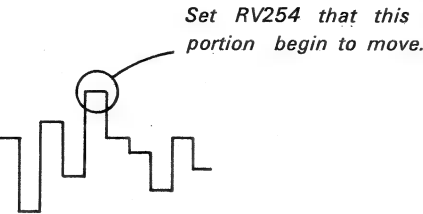


SECTION 4
CIRCUIT ADJUSTMENTS

4-1. BA BOARD ADJUSTMENTS

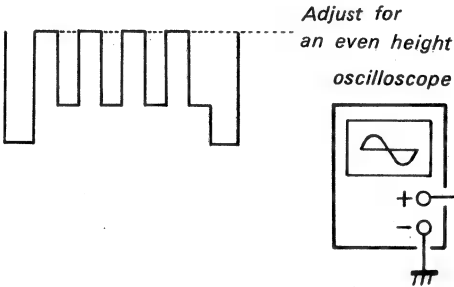
HUE BIAS ADJUSTMENT

1. Input a color bar signal.
PICTURE 80%
BRT 50%
2. Connect an oscilloscope to pin ③ of the BA-6
3. Turn RV254 fully counterclockwise, then slowly return RV254 until the waveform at pin ③ of BA-6 connector begin to change.



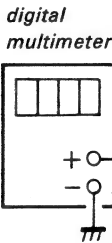
SUB COLOR ADJUSTMENT

1. Input a color bar signal.
PICTURE 80%
BRT 50%
COLOR 50%
2. Adjust RV264 for the waveform at connector BA-6 ③ to become as illustrated.



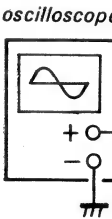
APC ADJUSTMENT

1. Input a color bar signal.
PICTURE 80%
BRT 50%
COLOR 50%
2. Connect a 100 kΩ resistor between IC253 pin ⑬ and ground. (Killor circuit goes off)
3. Ground IC253 pin ⑯ with a 10μ/16V chemical capacitor and remove color sync.
4. Adjust RV256 to get color sync.



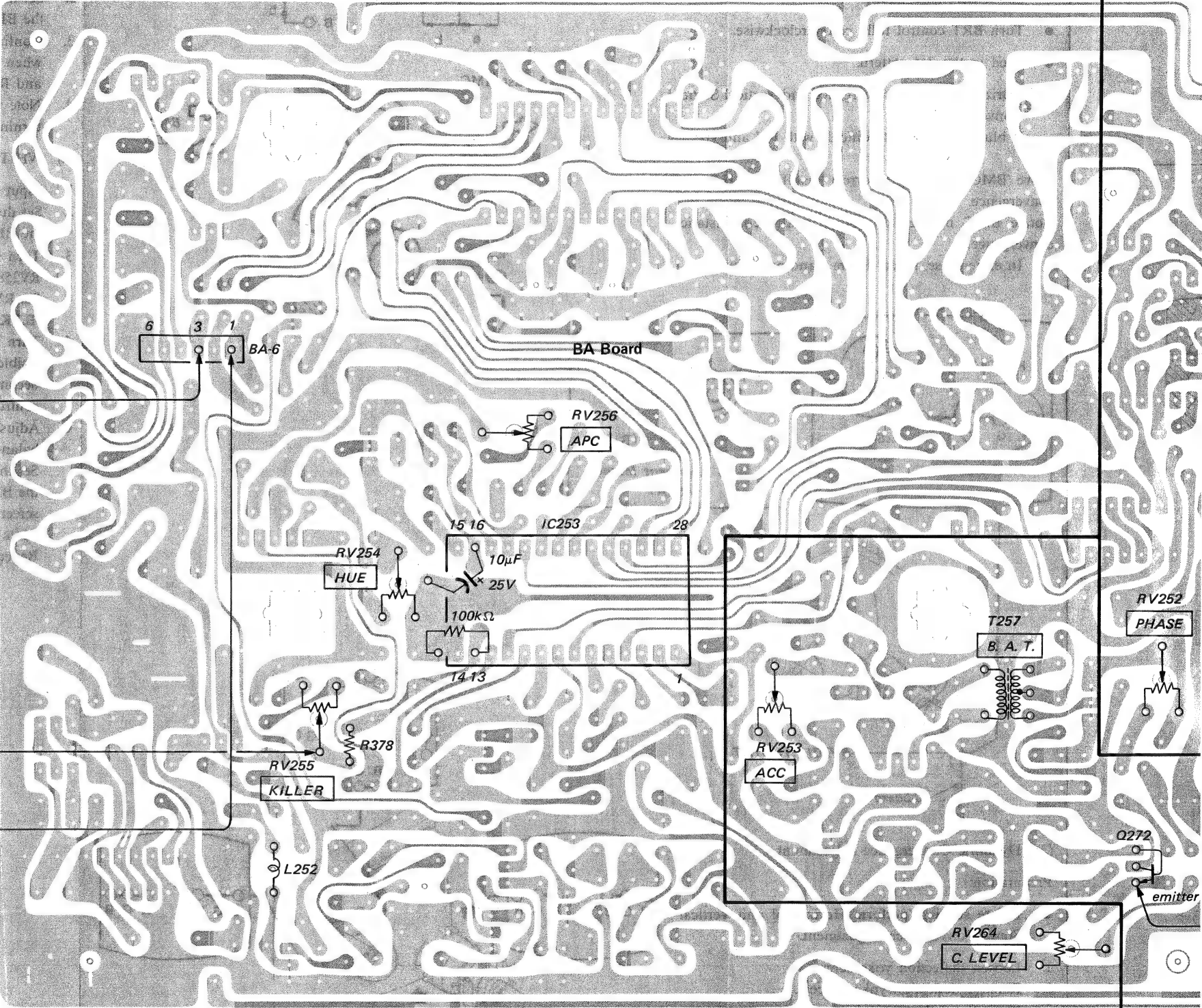
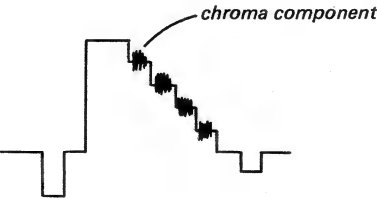
KILLER POINT ADJUSTMENT

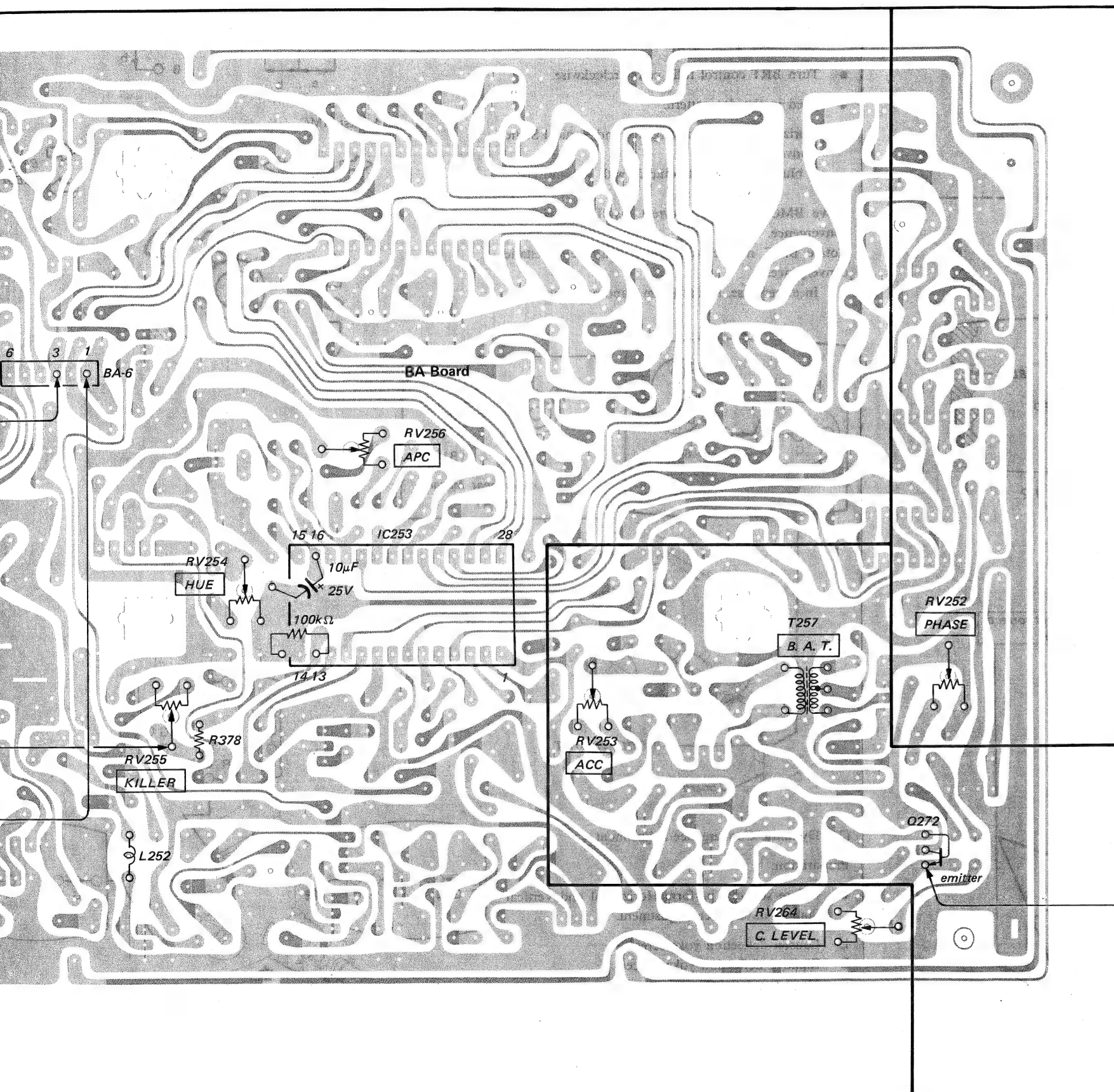
1. Tune in an off-air signal.
2. Connect digital multimeter between R255 and R378.
3. Adjust RV255 so that the voltage is 8.3V dc.



CHROMA TRAP ADJUSTMENT

1. Input a color bar signal.
PICTURE 80%
BRT 50%
2. Observe connector BA-6 pin ① waveform on the oscilloscope and adjust L252 for minimum chroma component.



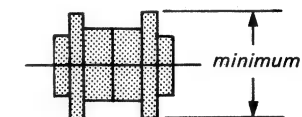


HUE ADJUSTMENT

1. Input a color bar signal.
 PICTURE 80%
 BRT 50%
 COLOR 50%
2. Set RV505 (user control HUE VR) at mechanical center.
3. Adjust RV252 so that the hue is optimized.

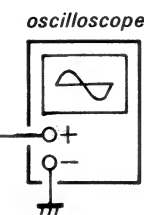
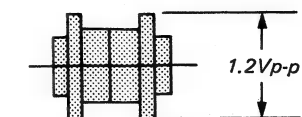
BAT ADJUSTMENT

1. Input a color bar signal.
 PICTURE 80%
 BRT 50%
 COLOR 50%
2. Observe Q272 (E) waveform on the oscilloscope and adjust T257 for minimum chrome component.

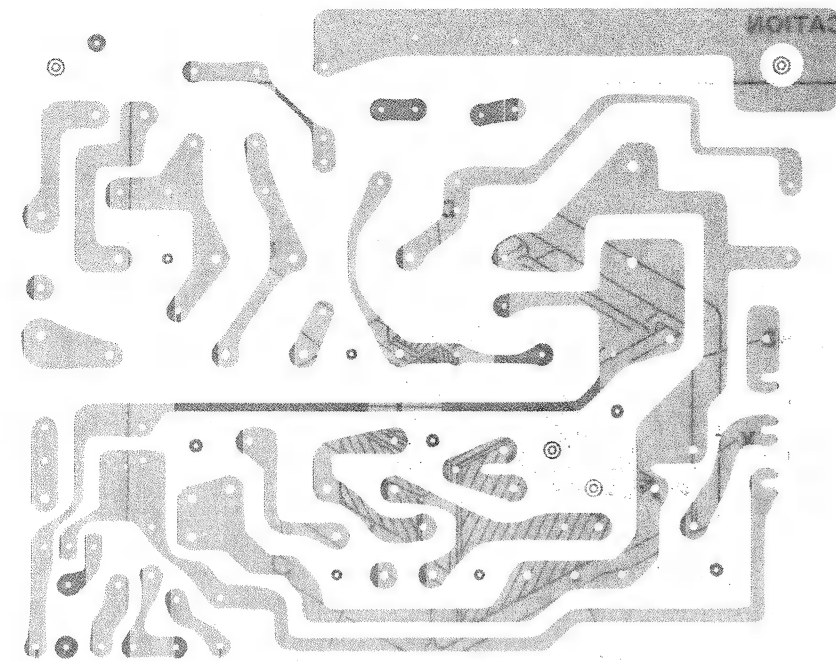


ACC ADJUSTMENT

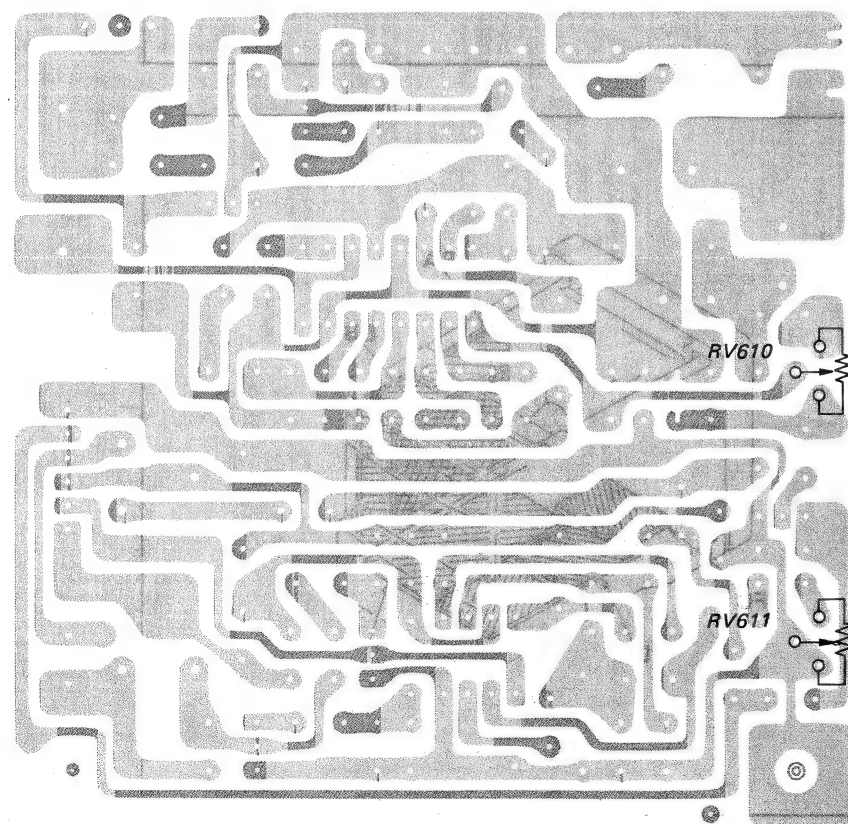
1. Input a color bar signal.
 PICTURE 80%
 BRT 50%
 COLOR 50%
2. Observe Q272 (E) waveform on the oscilloscope and adjust RV253 so that the signal component is 1.2 Vp-p.



4.2. SAFETY RELATED ADJUSTMENTS




FB Board



+B MAX CHECK R881 ADJUSTMENT


Be sure to perform this adjustment when replacing the following parts (marked  on the schematic)

 R880, R881, R882, R883, R884, R885, R886, RV807, D821, D822, Q804, Q805, CP800

1. Input a monoscope signal. (PICTURE 80% BRT 50%)
2. Turn +B ADJ VR (RV807) fully so that +B value is maximum. (Input of 130V $\pm 2_0^2$ V AC)
3. Confirm that TP91 value is less than 31.5V dc.

HV PROTECTOR OPERATION CHECK HOLD DOWN R856 ADJUSTMENT


Be sure to perform this adjustment when replacing the following parts (marked  on the schematic)

 R807, R818, R822, R826, R855, R856, R873, R874, R876, D800, D805, D824, D825, IC802

1. Input a monoscope signal. (PICTURE 80% BRT 50%)
2. Confirm that voltage of 19.6 ± 1.6 V appears between TP61 and GND during input of 120V AC.
3. Confirm that the HOLD-DOWN circuit operates (the raster disappears) by adding 25.0 ± 0.1 V DC between TP61 and GND.

BLANKING OPERATION CHECK R859 ADJUSTMENT

Be sure to perform this adjustment when replacing the following parts (marked  on the schematic)

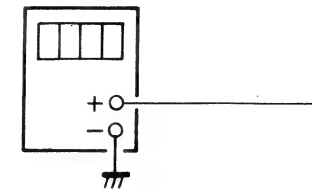
 R456, R457, R807, R819, R820, R822, R859, R862, D800, D801, IC253, IC802

1. Input a monoscope signal. (PICTURE 80% BRT 50%)
2. Turn +B ADJ VR (RV807) fully so that +B value is DOWN.
3. Confirm that the BLANKING circuit operates (the raster disappears) by adding 24.5 ± 0.1 V DC between TP61 and GND.

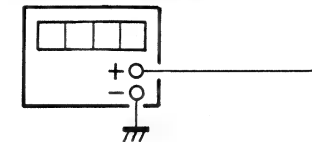
POWER SUPPLY OPERATION CHECK

1. Input a monoscope signal.
2. Connect a digital voltmeter to connector DA-2.
3. Adjust RV610 for 15.0 ± 0.2 V DC.

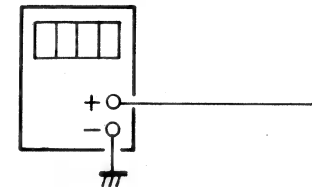
digital
multimeter



DC power supply



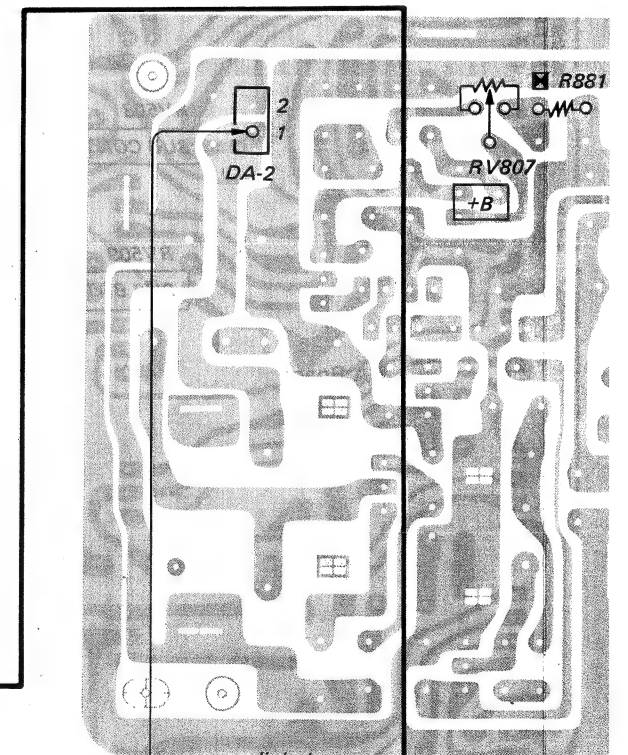
digital
multimeter



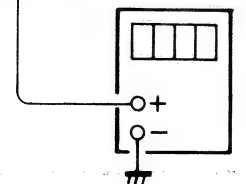
4.3. DA BOARD ADJUSTMENTS

H.SIZE ADJUSTMENT

1. Input a monoscope pattern signal.
PICTURE 80%
BRT 50%
2. Set the H.SIZE (L804) to obtain a suitable



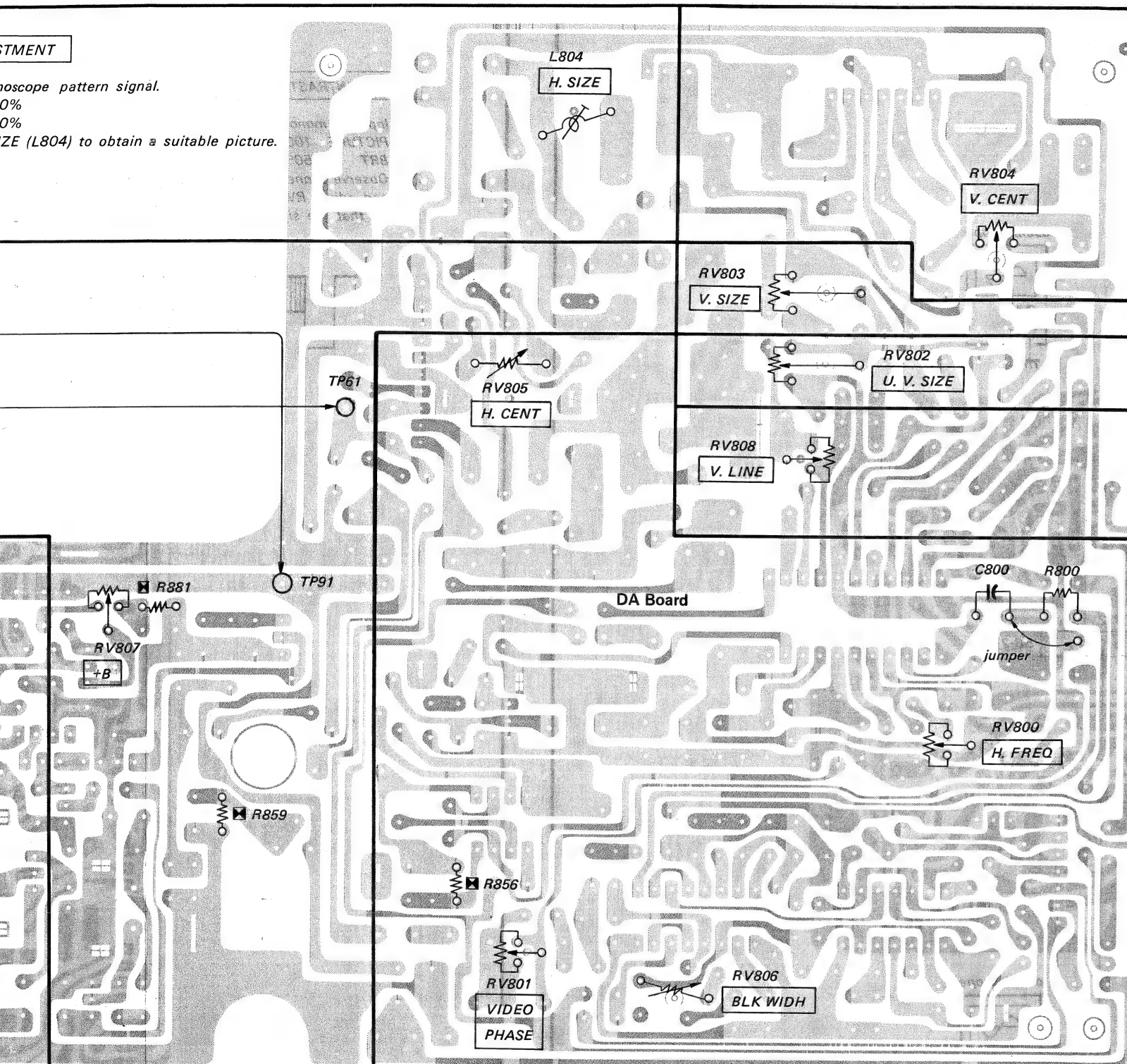
digital
multimeter



ENTS

STMENT

monoscope pattern signal.
0%
0%
IZE (L804) to obtain a suitable picture.



V. CENT ADJUSTMENT

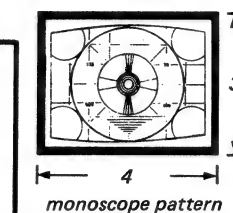
1. Input a monoscope pattern signal.
PICTURE 80%
BRT 50%
2. Adjust with RV804 so that picture is cetered.

V. SIZE ADJUSTMENT

1. Input a monoscope pattern signal.
PICTURE 80%
BRT 50%
2. Set the V.SIZE (RV803) to obtain a suitable picture.

UNDER-SCAN V.SIZE ADJUSTMENT

1. Input a monoscope pattern signal.
PICTURE 80%
BRT 50%
SCAN UNDER
2. Adjust UN V.SIZE (RV802) so that the monoscope pattern of H.SIZE and V.SIZE is 4:3.

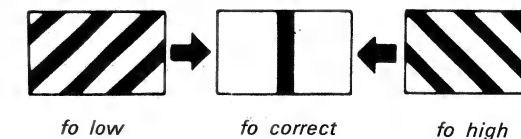


V LIN ADJUSTMENT

1. Input a monoscope pattern signal.
PICTURE 80%
BRT 50%
2. Set the V.LIN (RV808) to obtain a suitable picture.

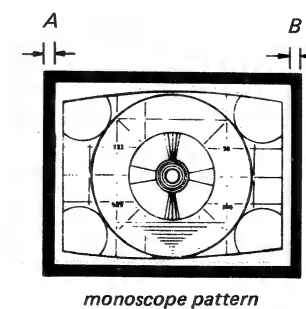
H.FREQ ADJUSTMENT

1. Input a monoscope pattern signal.
PICTURE 80%
BRT 50%
2. Connect to ground C800 and R800 with Jumper.
3. Adjust with RV800 (H.FREQ) as shown in figure.



H BLANKING ADJUSTMENT

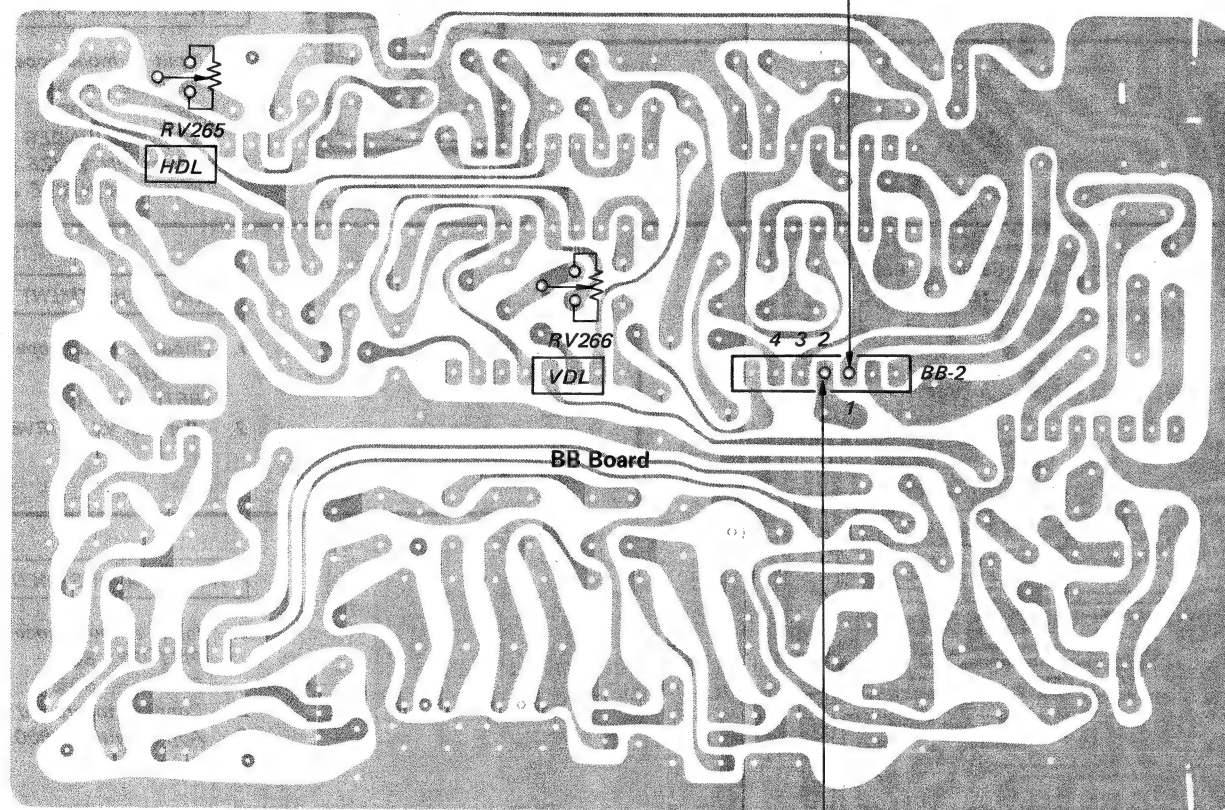
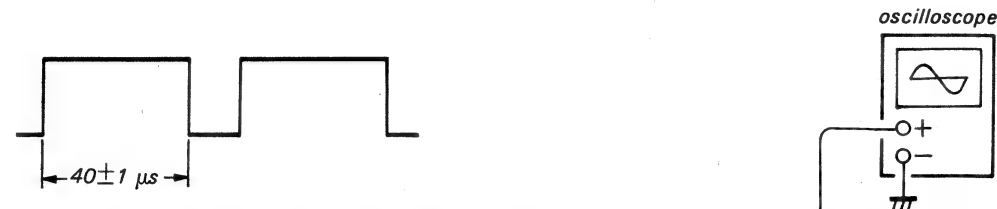
1. Input a monoscope pattern signal.
PICTURE 80%
BRT 50%
SCAN UNDER
2. Adjust VIDEO PHASE (RV801) and H.BLK WIDTH (RV806) to be A=B, as shown in the figure.



4-4. BB BOARD ADJUSTMENTS

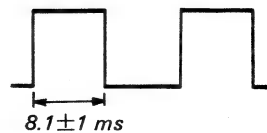
1H DELAY ADJUSTMENT

1. Input a color bar signal.
PICTURE 80%
BRT 50%
2. Observe the connector BB-2 pin ① waveform on the oscilloscope, and adjust RV265 for $40 \pm 1 \mu\text{s}$.



V.DELAY ADJUSTMENT

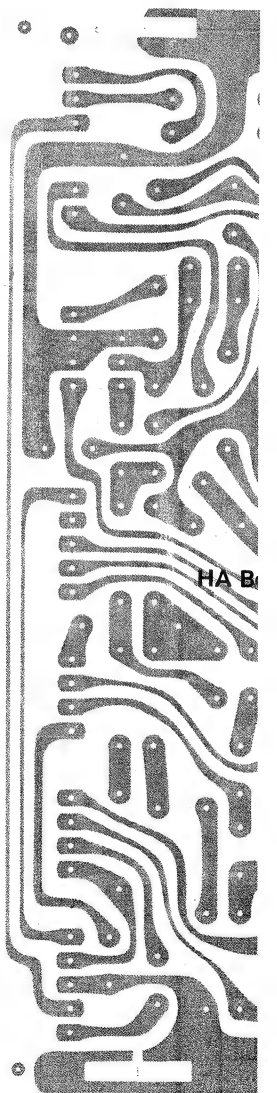
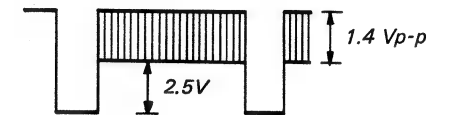
1. Input a color bar signal.
PICTURE 80%
BRT 50%
2. Observe the connector BB-2 pin ② waveform on the oscilloscope, and adjust RV266 for $8.1 \pm 1 \text{ ms}$.



4-5. HA BOARD ADJUSTMENT

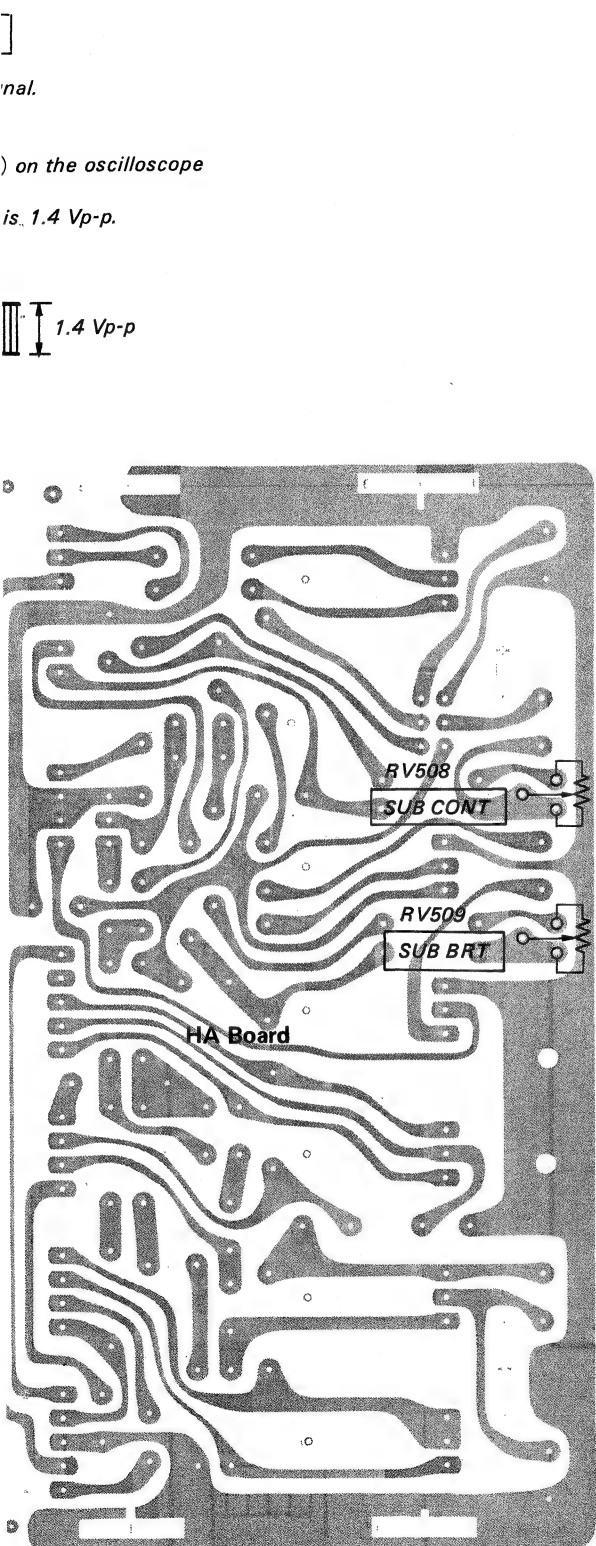
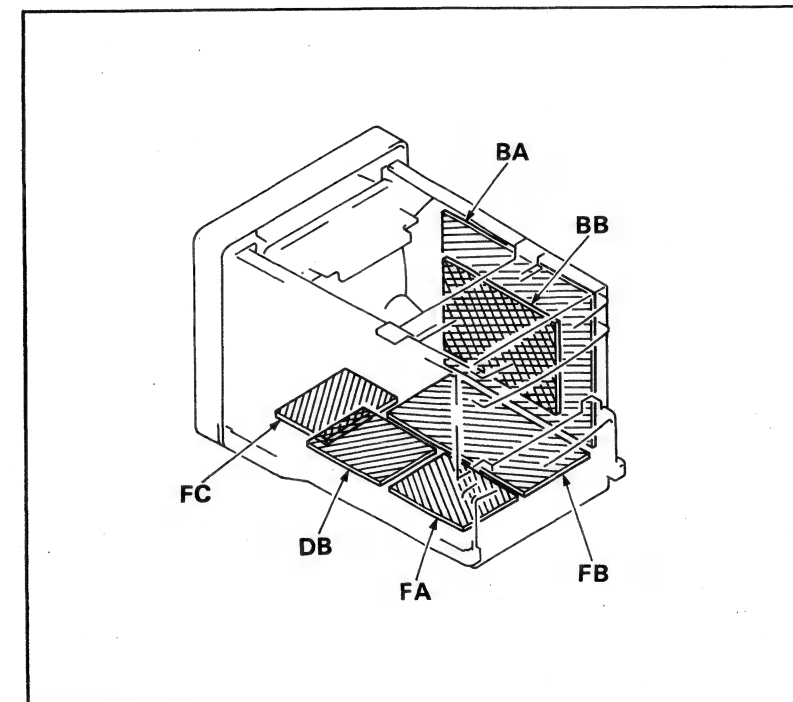
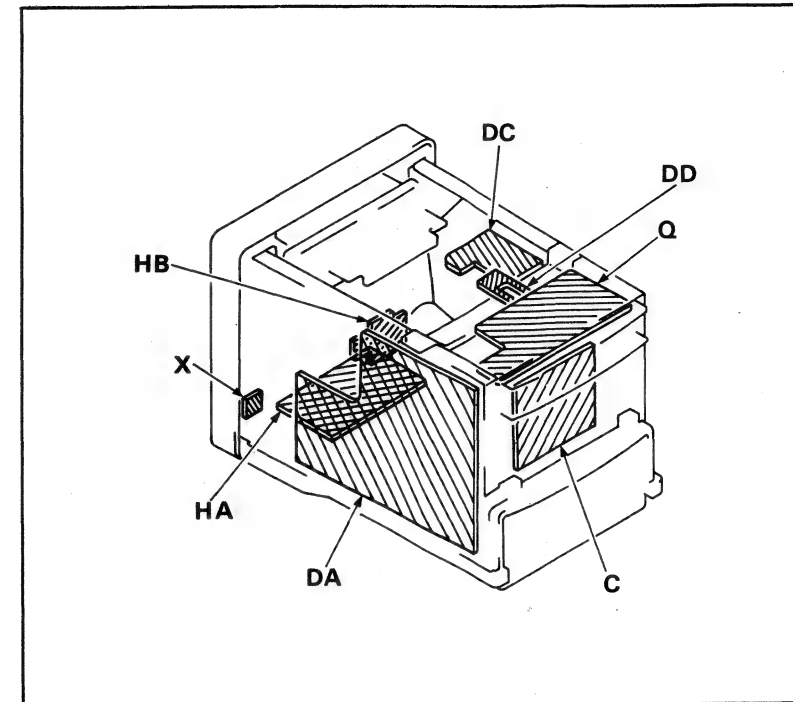
SUB CONTRAST ADJUSTMENT

1. Input a monoscope pattern signal.
PICTURE 100%
BRT 50%
2. Observe connector BA-6 pin ③ on the oscilloscope and adjust RV508.
So that the signal component is 1.4 Vp-p.

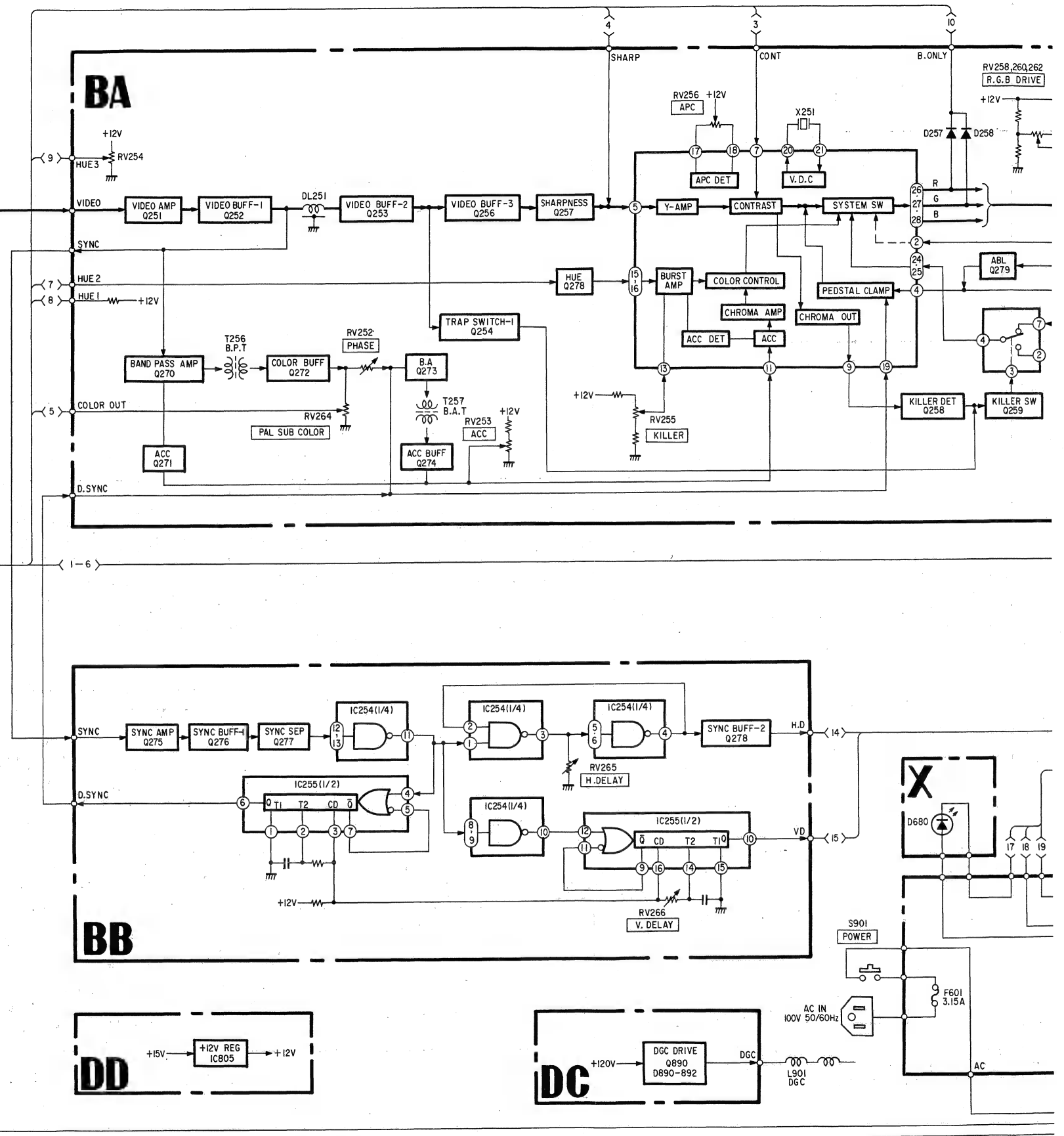
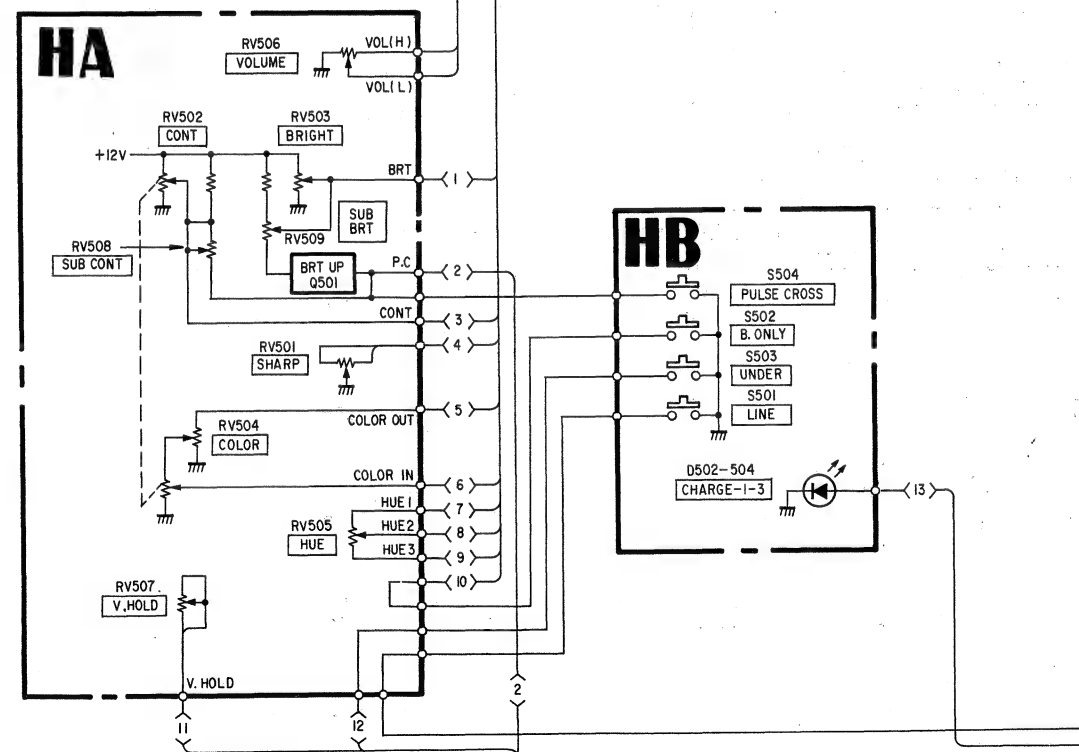
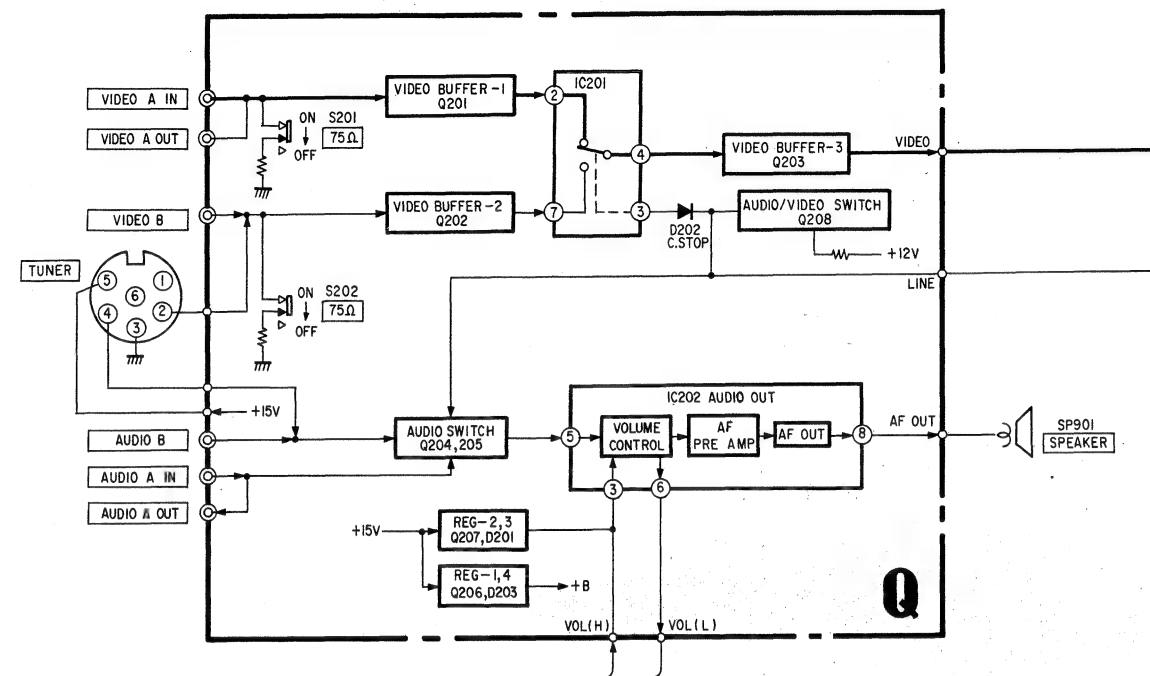


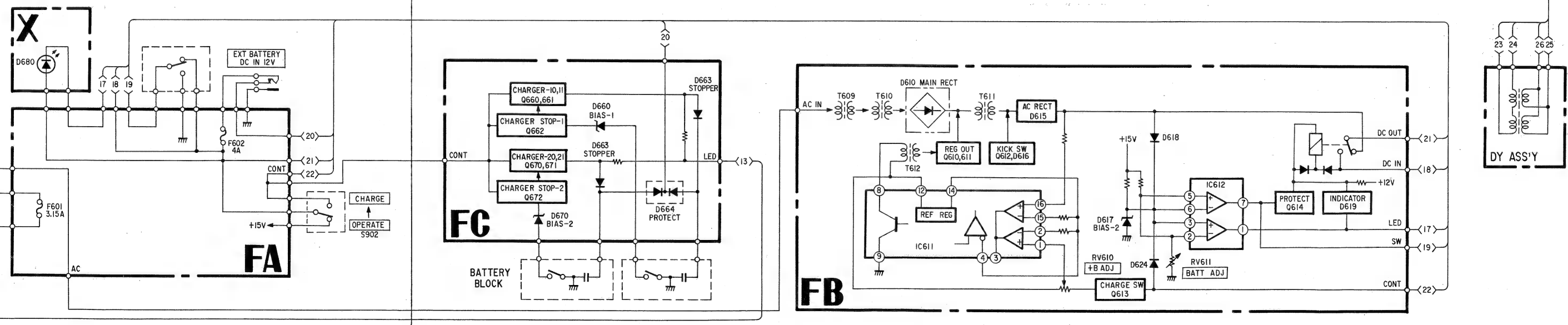
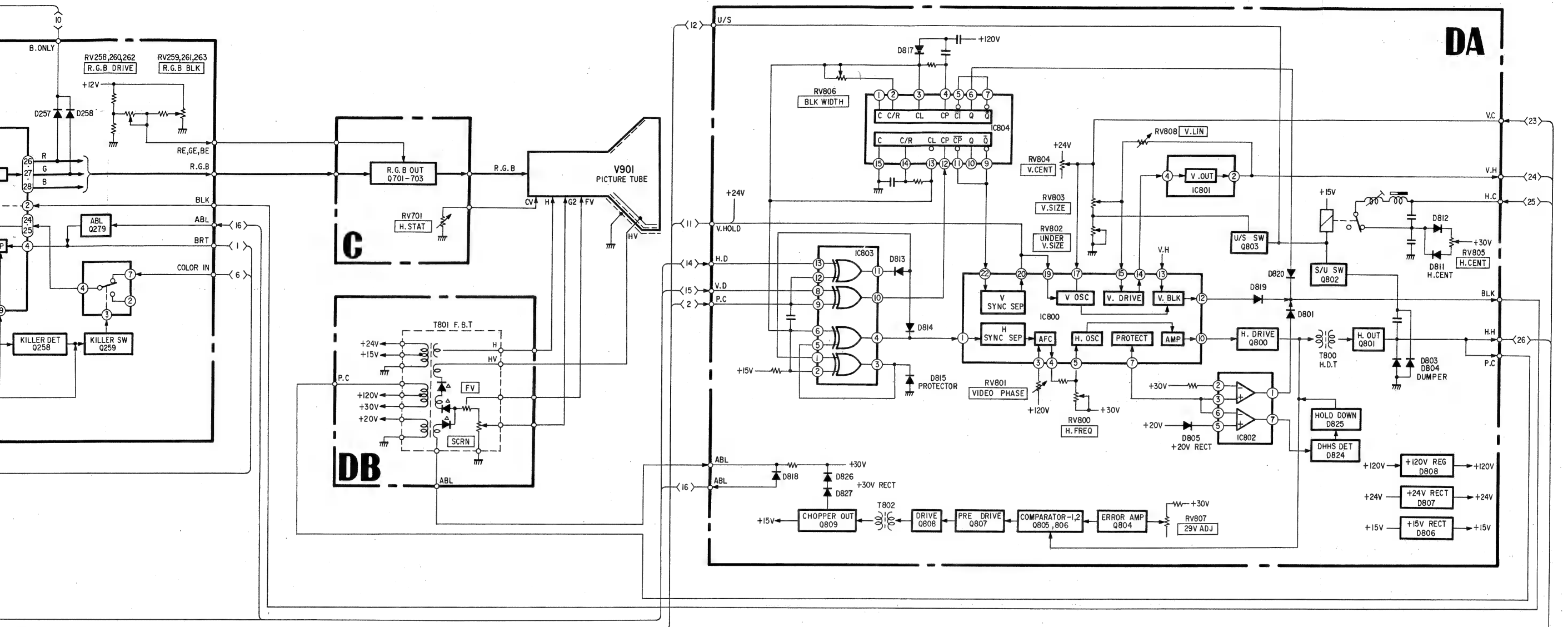
SECTION 5 DIAGRAMS

5-1. CIRCUIT BOARDS LOCATION











5-2. BLOCK DIAGRAM











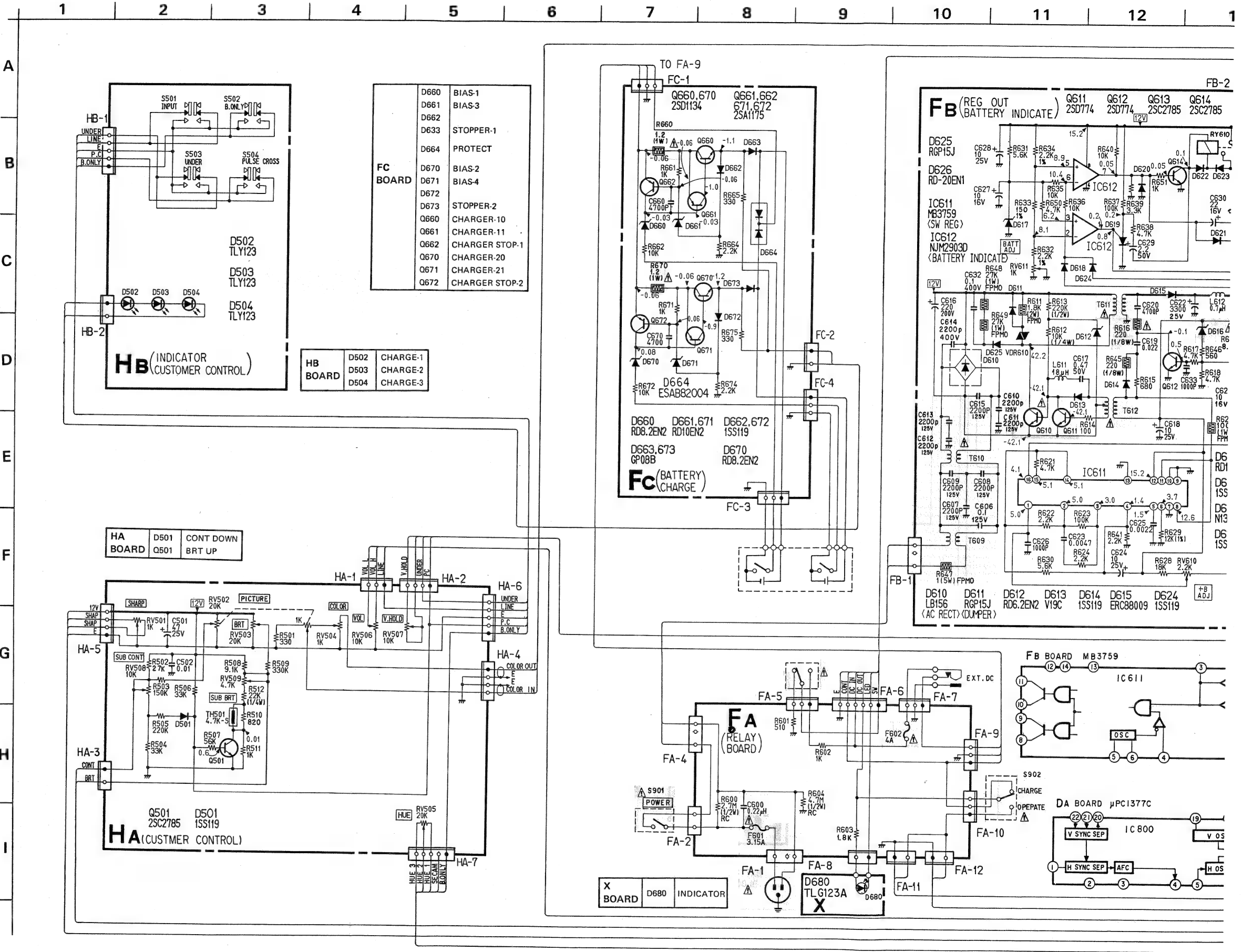
5-3. SCHEMATIC DIAGRAMS

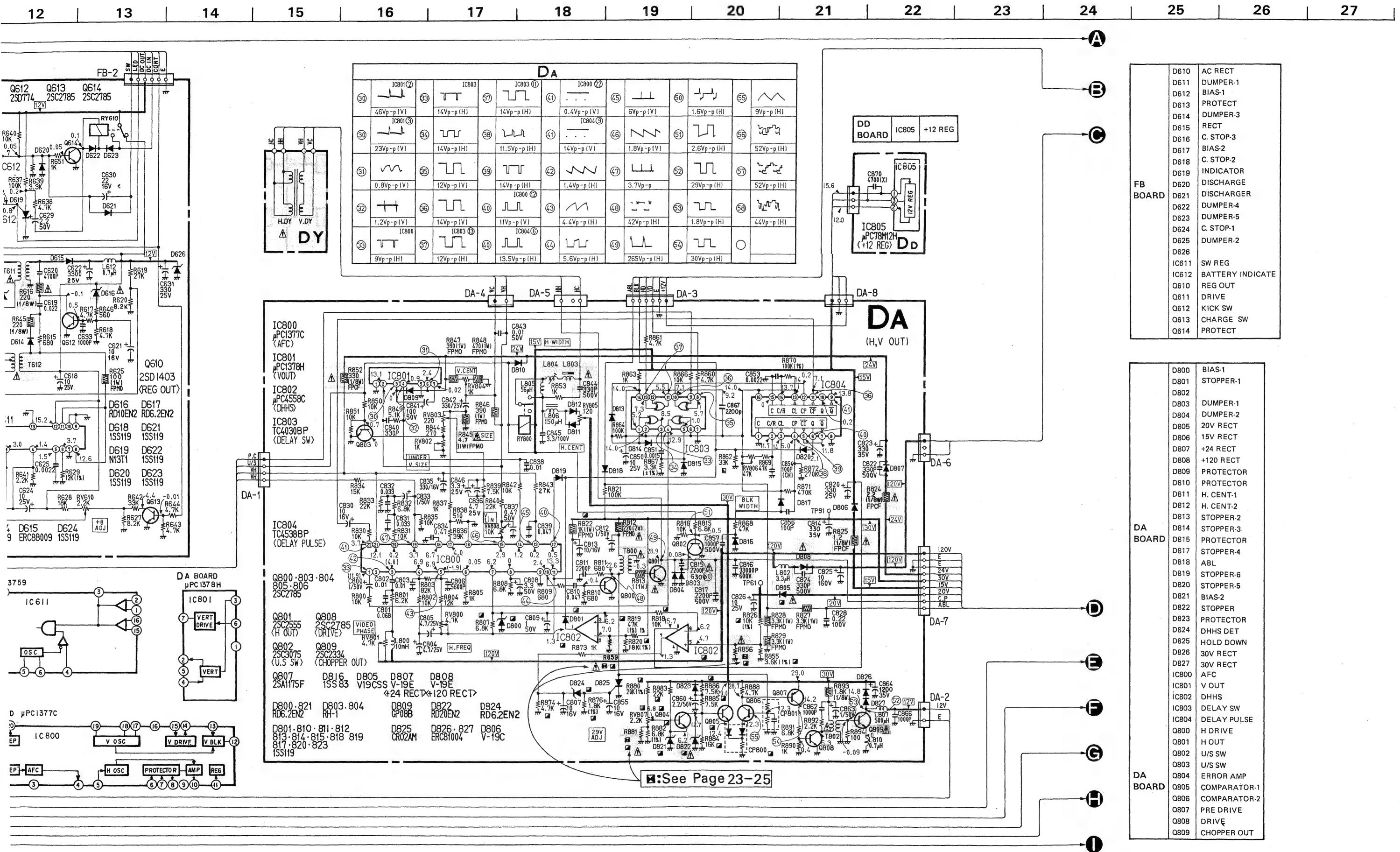
Note: The components identified by shading and mark  are critical for safety. Replace only with part number specified.

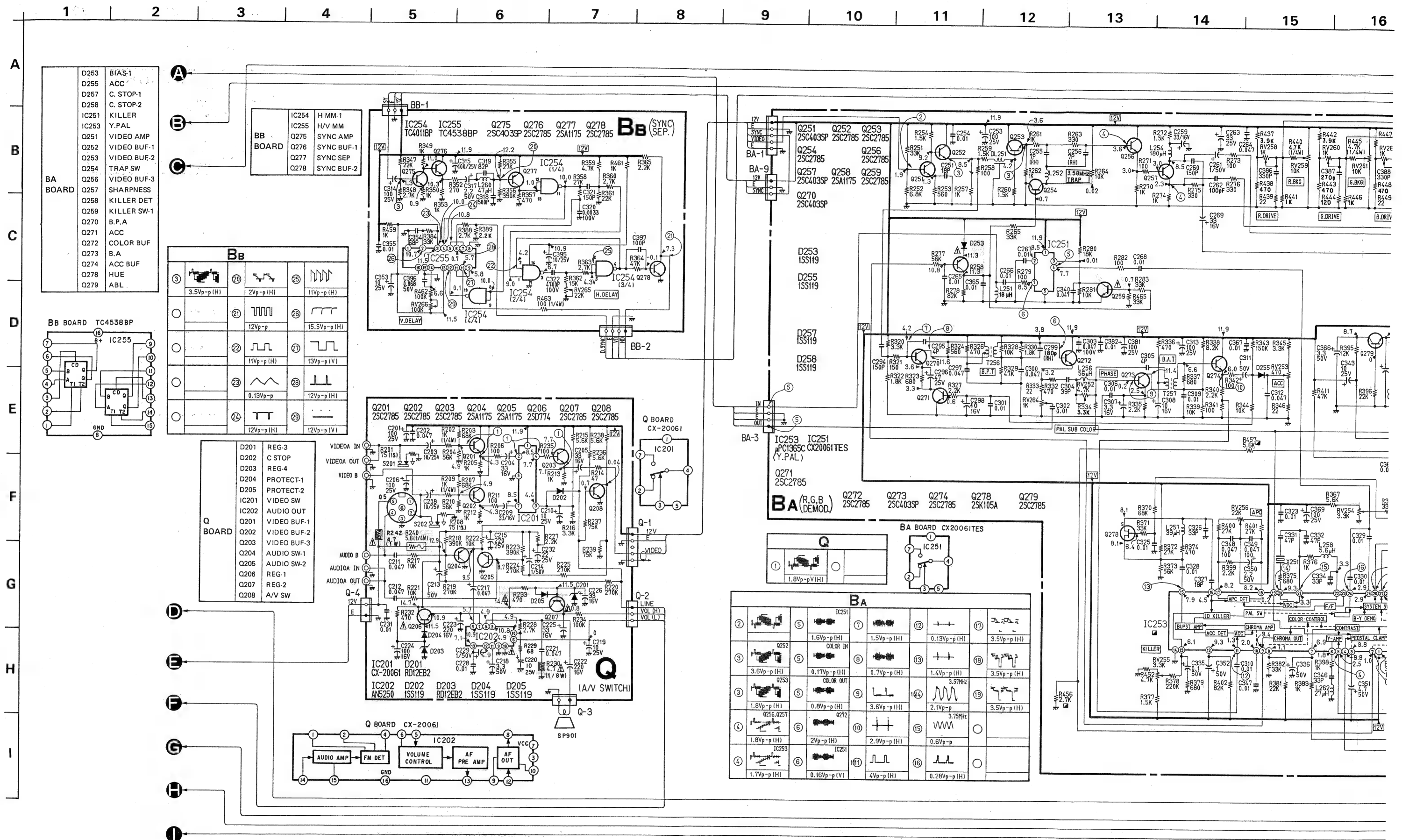
- All capacitors are in μF unless otherwise noted. pF: μF 50WV or less are not indicated except for electrolytics.
 - All resistors are in ohms, 1/6W unless otherwise noted. k Ω : 1000 Ω , M Ω : 1000k Ω
 -  : nonflammable resistor.
 -  : fusible resistor.
 -  : internal component.
 -  : panel designation.
 - The components identified by  in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Select the resistance value according to SAFETY RELATED ADJUSTMENT.
 - When replacing components identified by  , make the necessary adjustments indicated. If results do not meet the specified value, change the component identified by  and repeat the adjustment until the specified value is achieved. (Refer to R881, R856 and R859 adjustment on page 23, 24.)
- When replacing the part in below table, be shre to per- from the replated adjusment.

Part replaced ()	Adjustment ()
R880, R881, R882, R883, R884, R885, R886, RV807, D821, D822, Q804, Q805, CP800	R881 adjustment
R807, R818, R822, R826, R855, R856, R873, R874, R876, D800, D805, D824, D825, IC802	R856 adjustment
R456, R457, R807, R819, R820, R822, R859, R862, D800, D801, IC253, IC802	R859 adjustment

- All variable and adjustable resistors ahve onaracteristic curve B, unless otherwise noted.
- Readings are taken with a color-bar signal input to LINE A.
- Voltages are dc with respect to ground unless otherwise noted.
- Readings are taken with a 10M Ω digital multimeter.
-  : adjustment for repair.
- Voltage variations may be noted due to normal produc- tion tolerances.
-  : B+ bus.
-  : B- bus.
-  : Can not be measured.

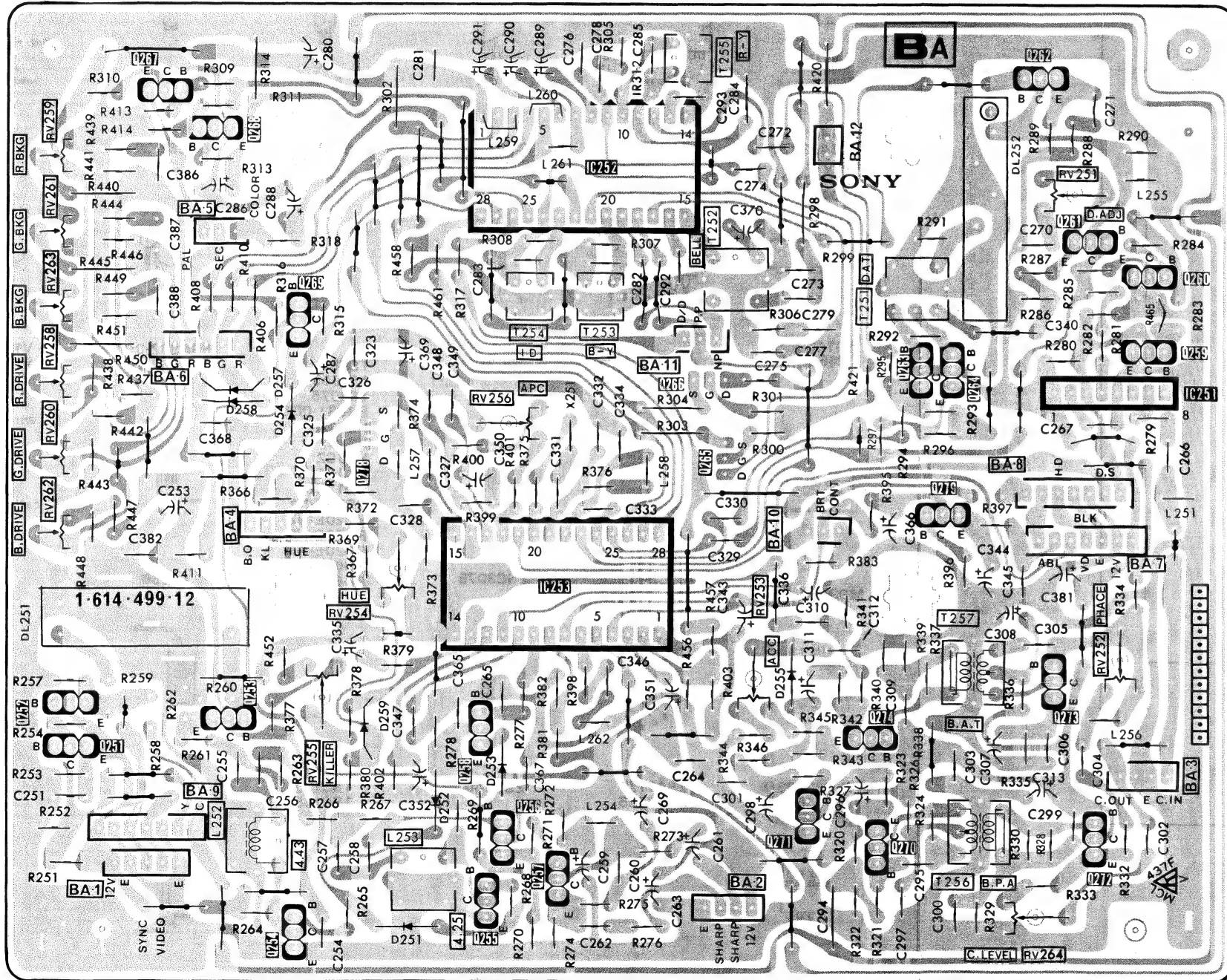




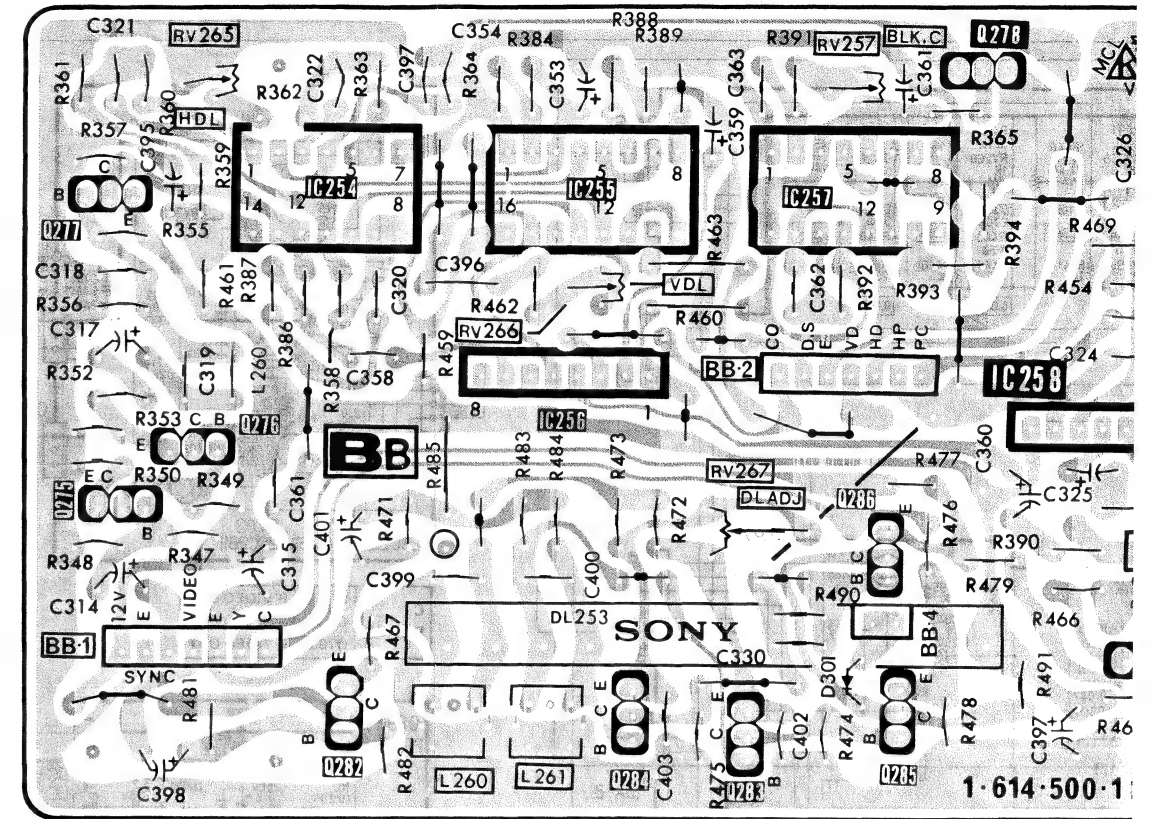


— BA Board —

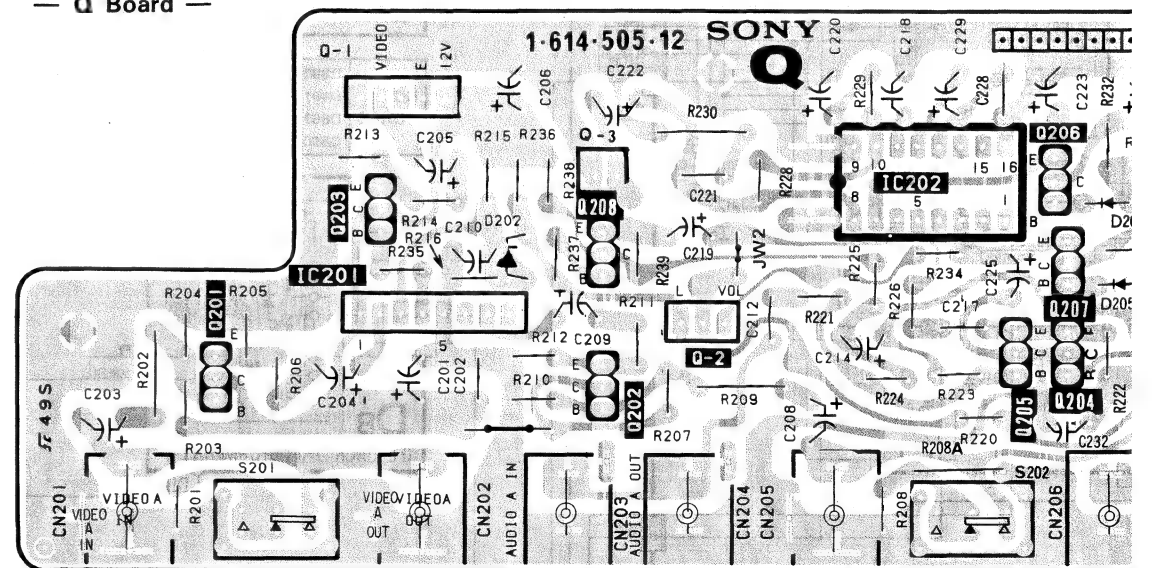
Q	267	268	269	278	IC252	262	261	260	Q
IC	252	253	254	255	IC253	263	264	259	IC
	251			256	257	279	273	272	
D		257	254	259	251	271	274		D
		258		252	253	270			
ADJ	RV258				RV256			RV251	ADJ
	RV263		RV255	RV254				RV252	
							RV264		

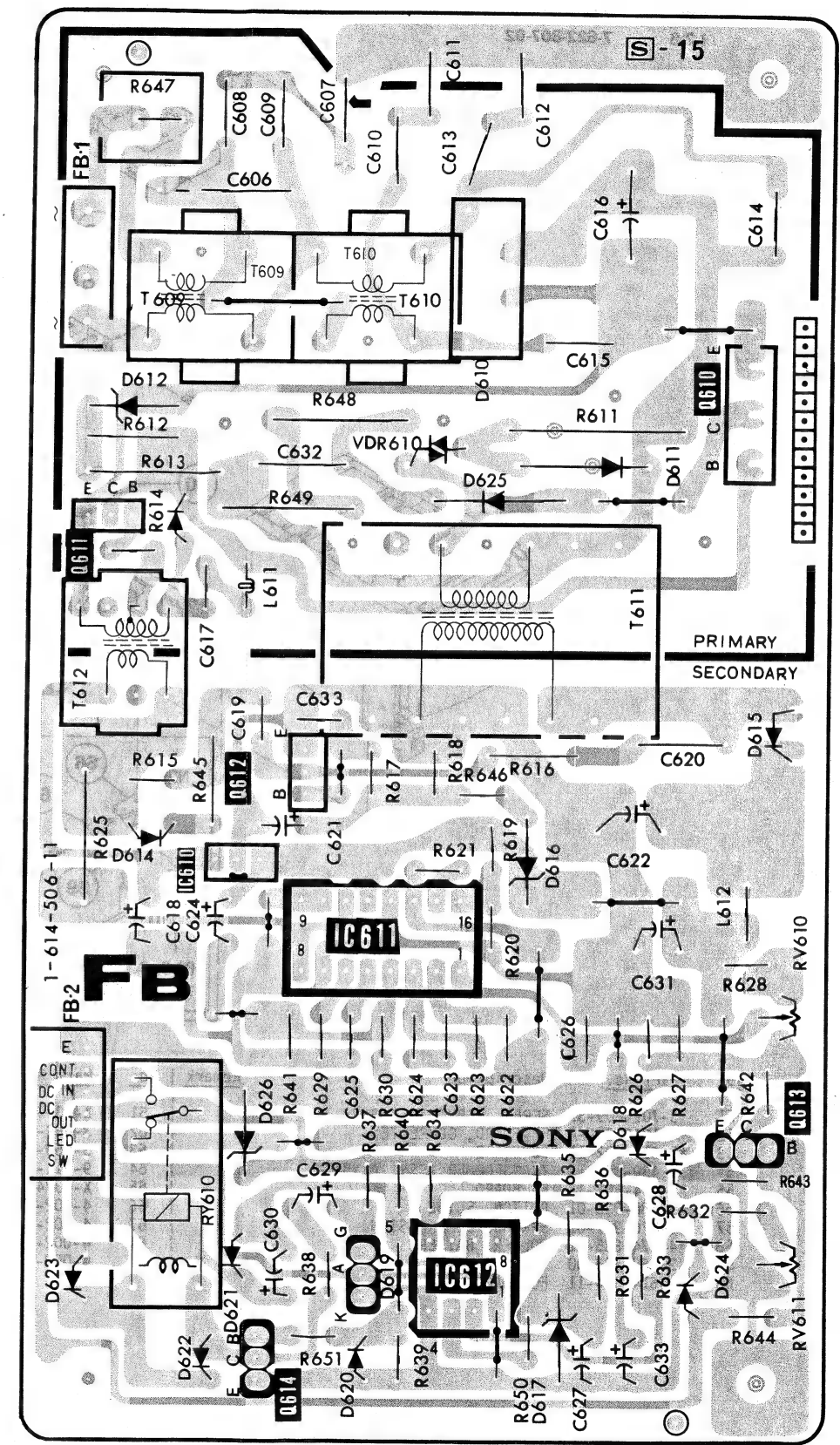
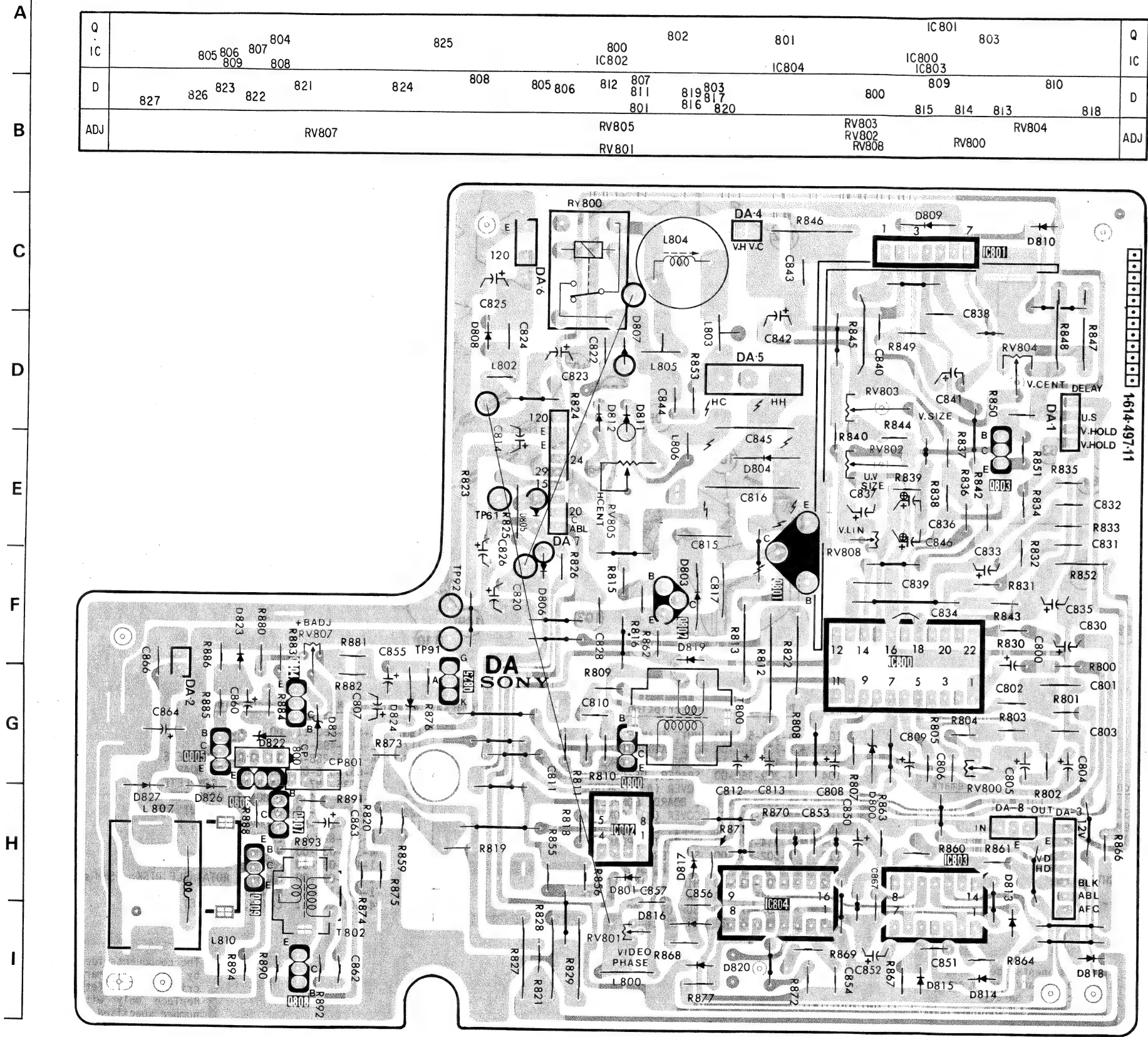


— BB Board —



— Q Board —

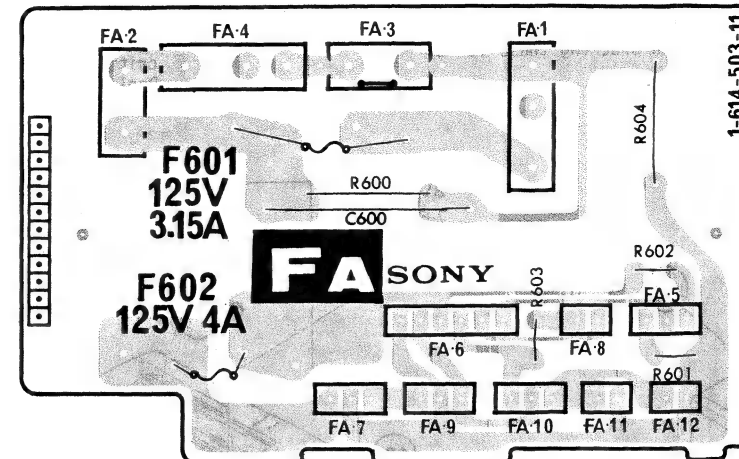
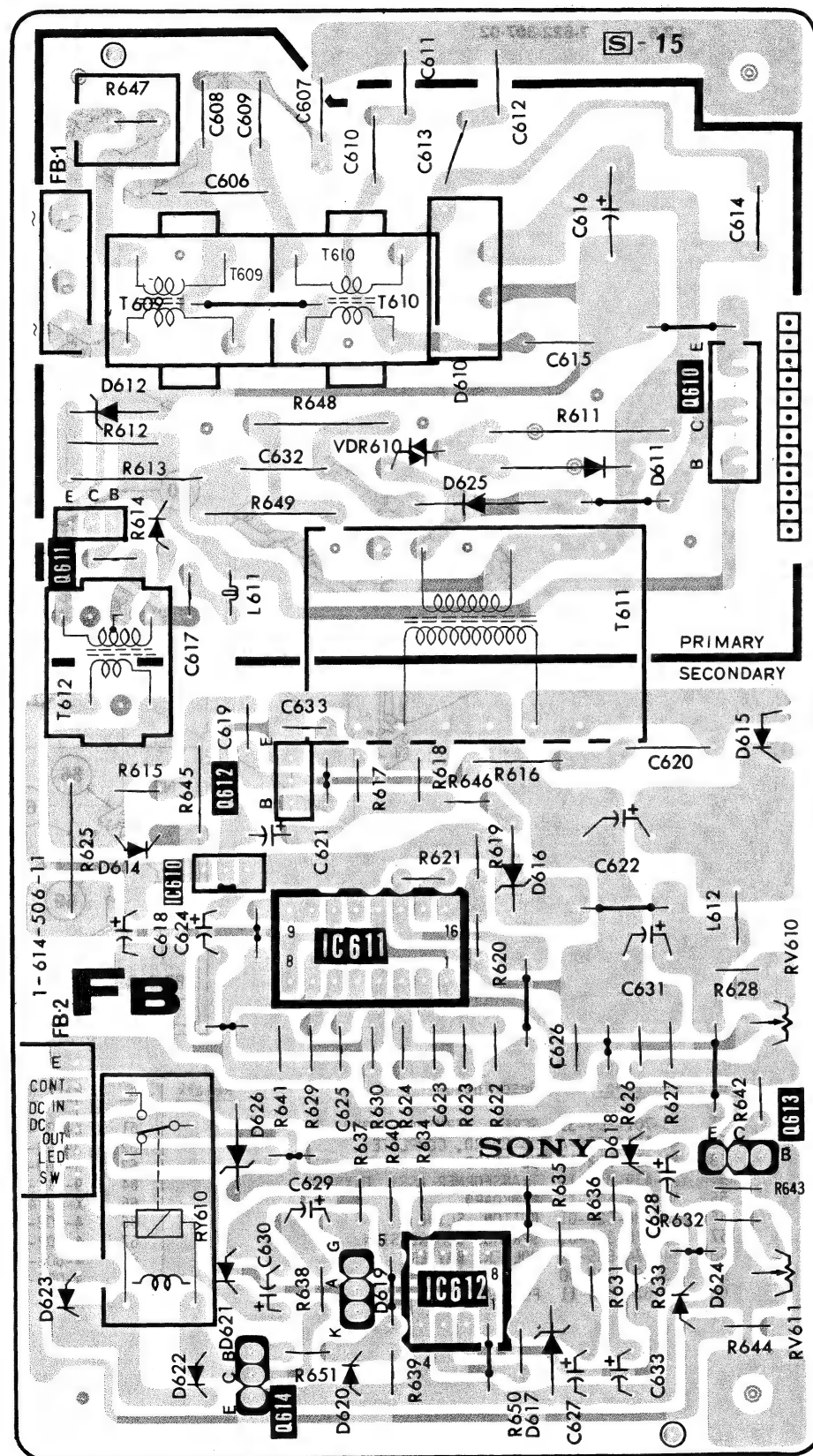




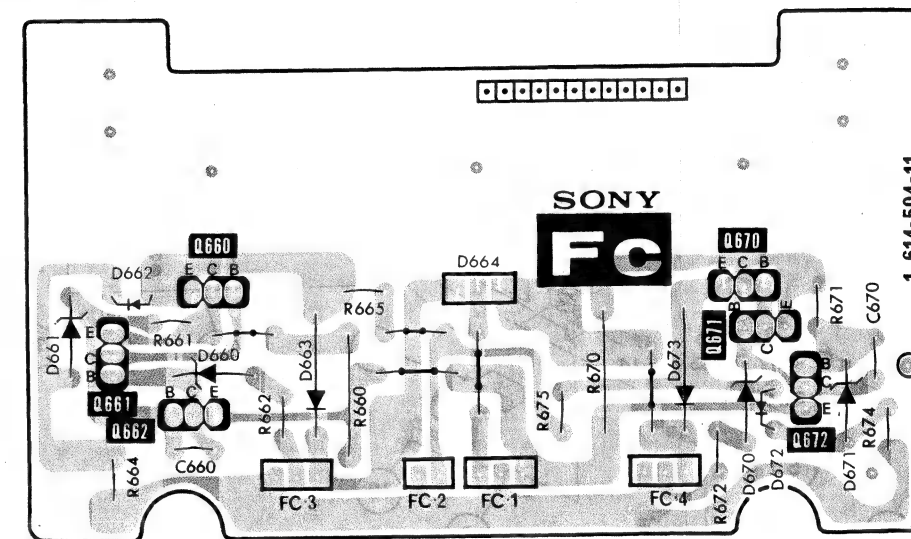
[FLYBACK TRANSFORMER]

22

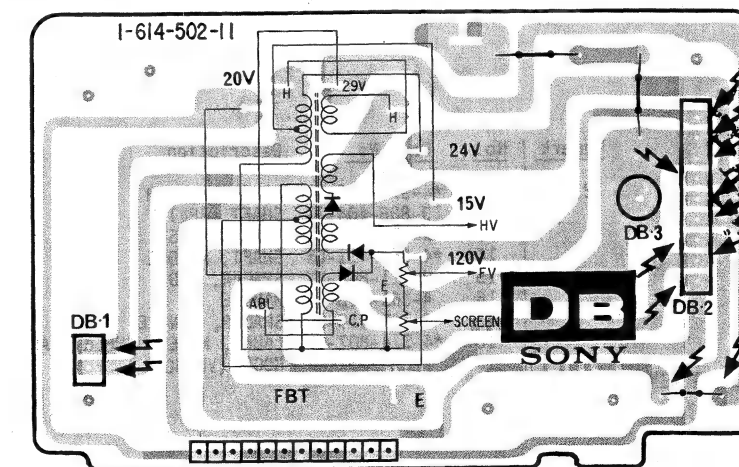
— FA Board —



— FC Board —



— DB Board —



SECTION 6 EXPLODED VIEWS

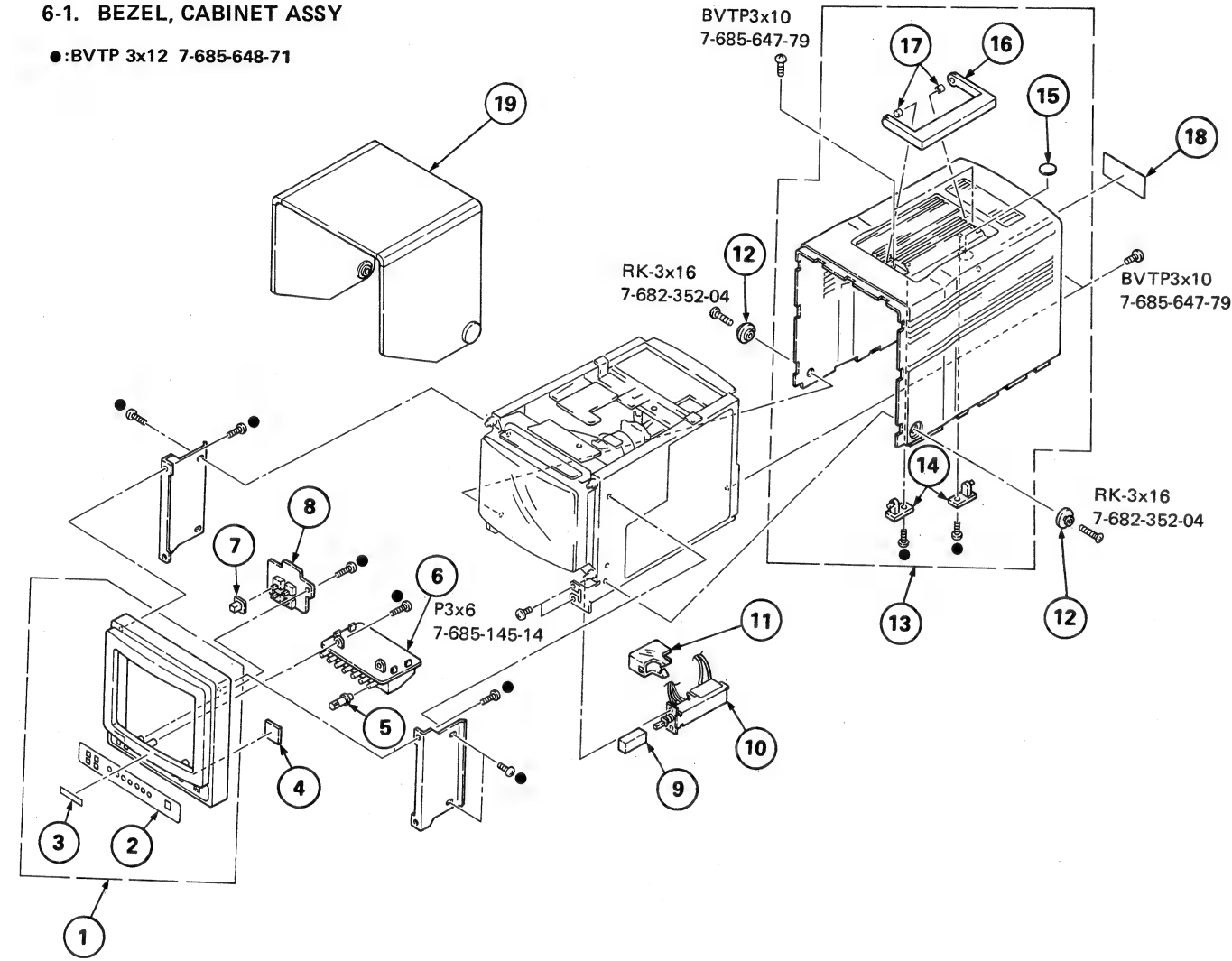
NOTE:
• Items with no part number and no description are not stocked because they are seldom required for routine service.
• The construction parts of an assembled part are indicated with a collation number in the remark column.

• Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and mark Δ are critical for safety. Replace only with part number specified.

6-1. BEZEL, CABINET ASSY

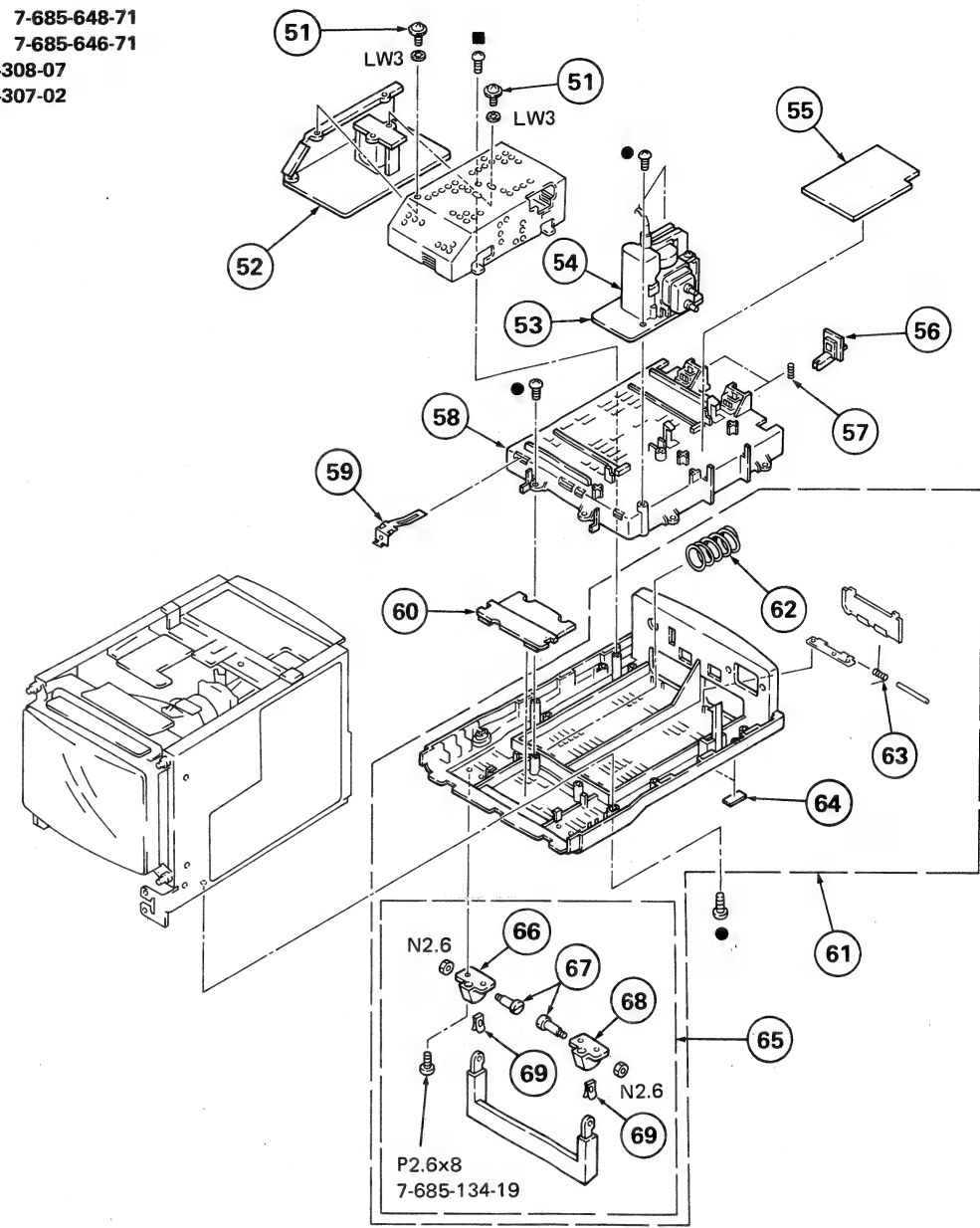
●:BVTP 3x12 7-685-648-71



No.	Part No.	Description	Remark	No.	Part No.	Description	Remark
1	X-4374-805-1	BEZEL ASSY	2,3	11	*4-374-825-01	COVER, SWITCH	
2	4-374-830-01	LABEL, CONTROL		12	3-888-404-11	SHAFT, BELT	
3	3-566-707-11	EMBLEM, SONY		13	X-4374-807-1	CABINET ASSY	14-17
4	*1-614-496-11	X BOARD		14	*4-361-411-01	SHAFT, HANDLE	
5	4-374-820-01	KNOB, CONTROL		15	9-911-840-XX	SPACER, SIDE	
6	*1-614-494-11	HA BOARD		16	4-361-428-21	HANDLE	
7	4-369-627-11	PUSH BUTTON		17	*4-361-410-00	SPACER, HANDLE	
8	*1-614-495-11	HB BOARD		18	*4-374-807-01	LABEL, MODEL NUMBER (LARGE)	
9	4-374-839-01	BUTTON (A)		19	4-374-831-01	HOOD (VF-501)	
10	Δ 1-570-200-11	SWITCH, PUSH (AC POWER)(1 KEY)					

6-2. CABINET BOTTOM ASSY

● : BVTP 3x12 7-685-648-71
■ : BVTP 3x8 7-685-646-71
LW3 7-623-308-07
L2.6 7-622-307-02



No.	Part No.	Description	Remark	No.	Part No.	Description	Remark
51	3-701-809-31	SCREW, TERMINAL (M3X8)		61	X-4374-806-1	CABINET ASSY, BOTTOM	62-69
52	*A-1245-256-A	FB BOARD, COMPLETE		62	3-669-594-00	SPRING, COMPRESSION	
53	*1-614-502-11	DB BOARD		63	3-669-592-00	SPRING (A), TORSION	
54	Δ 1-439-358-11	TRANSFORMER ASSY, FLYBACK		64	9-911-852-XX	CUSHION	
55	*1-614-503-11	FA BOARD		65	X-4374-802-1	LEG ASSY	66-69
56	3-686-028-01	BUTTON, SLIDE		66	4-002-791-00	BRACKET (RIGHT), LEG	
57	4-876-347-01	SPRING, COMPRESSION		67	4-002-789-00	SCREW	
58	*4-374-835-01	HOLDER, BATTERY		68	4-002-790-00	BRACKET (LEFT), LEG	
59	3-669-526-00	TERMINAL		69	4-002-732-02	SPRING	
60	*1-614-504-11	FC BOARD					

The components identified by shading and mark Δ are critical for safety. Replace only with part number specified.

6-3. CHA

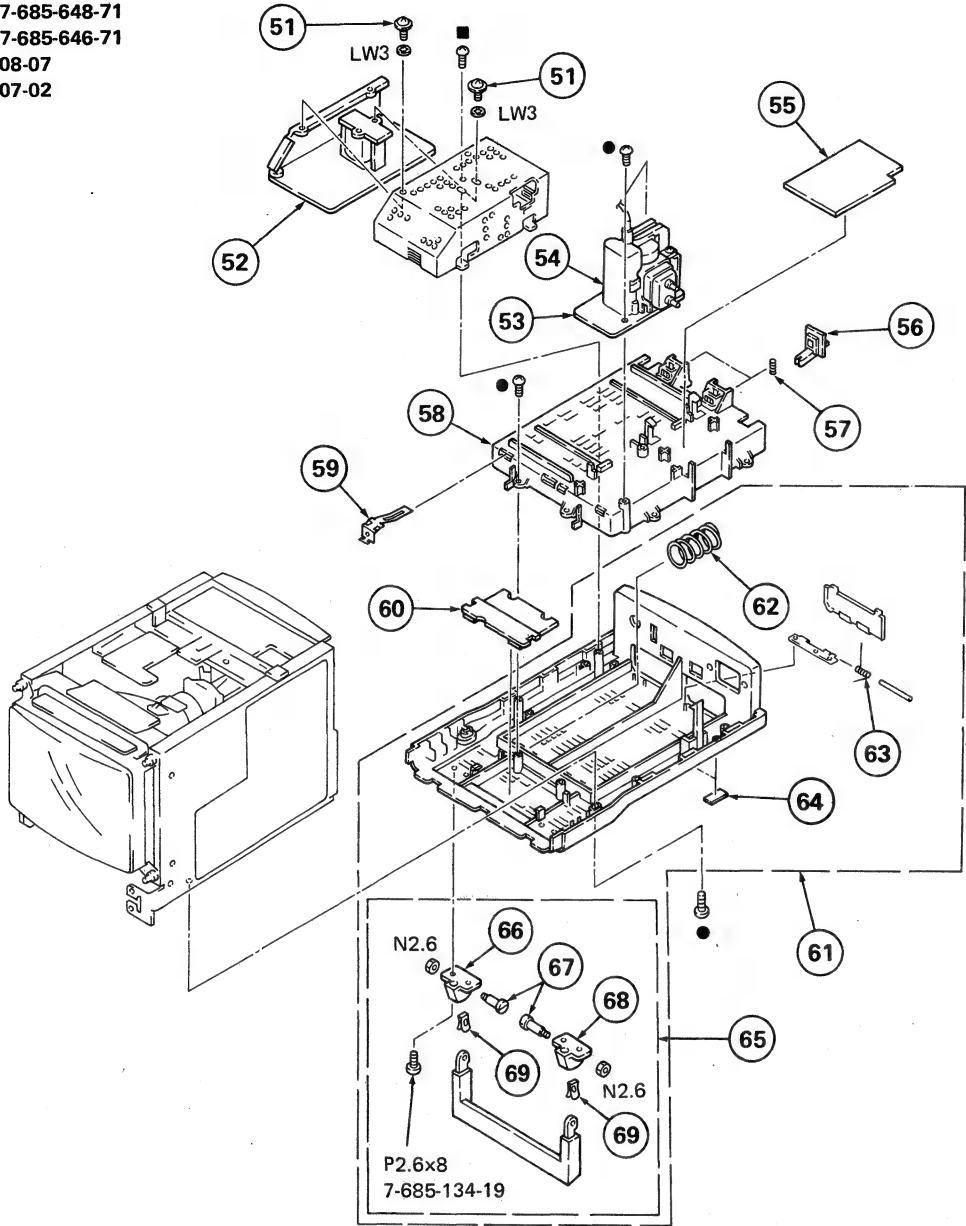
■ : BVTP



No.	Part No.	Description	Remark
101	4-		
102	Δ 8-		
103	Δ 1-		
104	4-		
105	*4-		
106	*A-		
107	*4-		
108	Δ 1-		
109	*4-		
110	1-		
111	Δ 1-		
112	*3-		
113	*A-		
114	*4-		
115	Δ 1-		

6-2. CABINET BOTTOM ASSY

- : BVTP 3x12 7-685-648-71
- : BVTP 3x8 7-685-646-71
- LW3 7-623-308-07
- L2.6 7-622-307-02

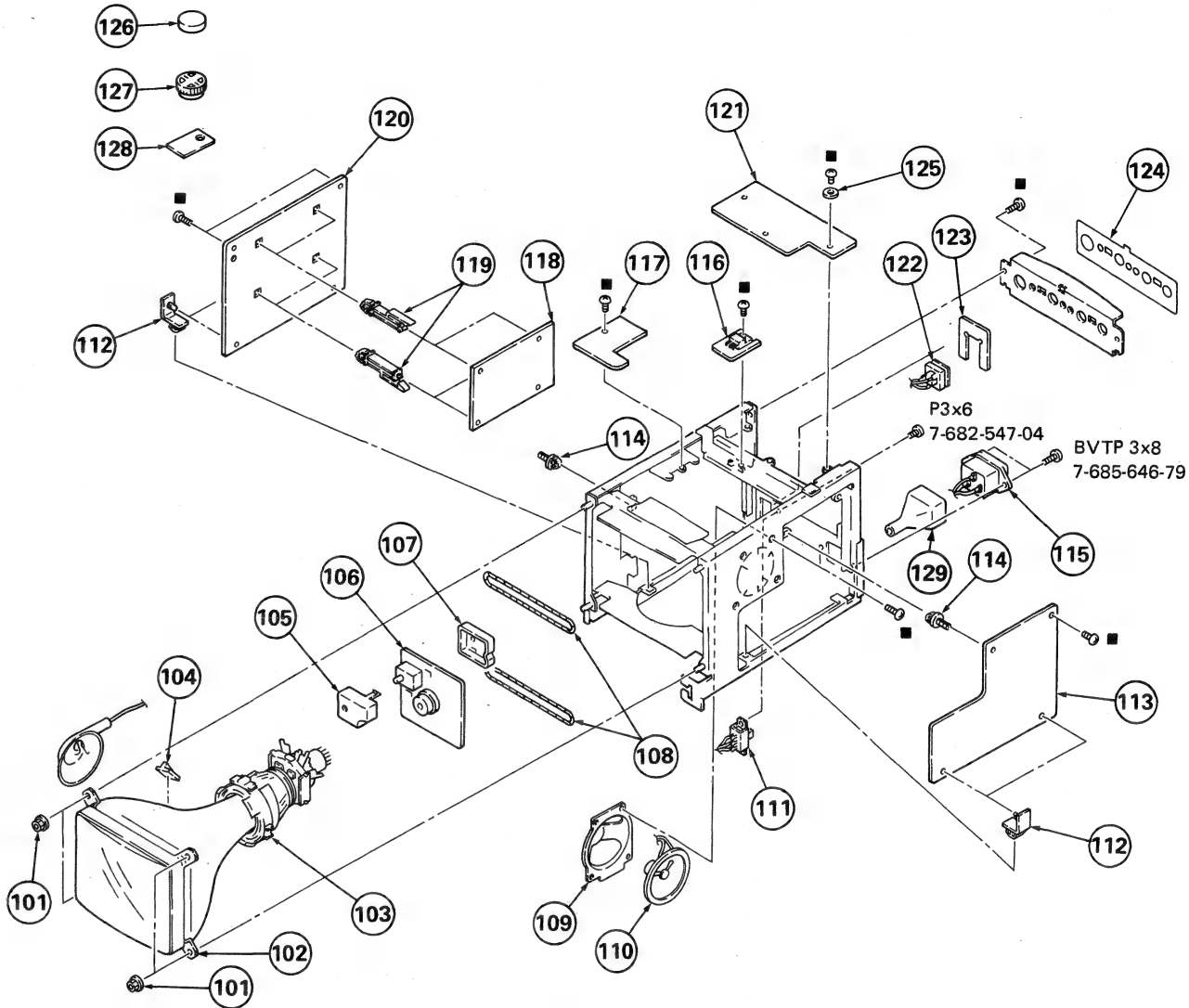


No.	Part No.	Description	Remark	No.	Part No.	Description	Remark
51	3-701-809-31	SCREW, TERMINAL (M3X8)		61	X-4374-806-1	CABINET ASSY, BOTTOM	62-69
52	*A-1245-256-A	FB BOARD, COMPLETE		62	3-669-594-00	SPRING, COMPRESSION	
53	*1-614-502-11	DB BOARD		63	3-669-592-00	SPRING (A), TORSION	
54	▲ 1-439-358-11	TRANSFORMER ASSY, FLYBACK		64	9-911-852-XX	CUSHION	
55	*1-614-503-11	FA BOARD		65	X-4374-802-1	LEG ASSY	66-69
56	3-686-028-01	BUTTON, SLIDE		66	4-002-791-00	BRACKET (RIGHT), LEG	
57	4-876-347-01	SPRING, COMPRESSION		67	4-002-789-00	SCREW	
58	*4-374-835-01	HOLDER, BATTERY		68	4-002-790-00	BRACKET (LEFT), LEG	
59	3-669-526-00	TERMINAL		69	4-002-732-02	SPRING	
60	*1-614-504-11	FC BOARD					

The components identified by shading and mark ▲ are critical for safety. Replace only with part number specified.

6-3. CHASSIS ASSY

- : BVTP 3x8 7-685-646-71



No.	Part No.	Description	Remark	No.	Part No.	Description	Remark
101	4-304-511-00	NUT, FLANGE		116	*1-615-160-11	DD BOARD	
102	▲ 8-737-151-05	CRT (A20JKU10X)		117	*1-614-498-11	DC BOARD	
103	▲ 1-451-265-11	DEFLECTION YOKE (SY-167)		118	*A-1135-288-A	BB BOARD, COMPLETE	
104	4-309-369-00	SPACER, DEFLECTION YOKE		119	*3-657-516-00	SUPPORT, PC BOARD	
105	*4-374-822-01	COVER (A), CONTROL		120	*A-1135-287-A	BA BOARD, COMPLETE	
106	*A-1330-584-A	C BOARD, COMPLETE		121	*A-1270-154-A	Q BOARD, COMPLETE	
107	*4-374-806-01	COVER (B), CONTROL		122	1-507-465-00	JACK, POWER OUTSIDE	
108	▲ 1-426-043-12	COIL, DEGAUSSING		123	*4-374-801-01	STOPPER, JACK, DC	
109	*4-344-240-00	BRACKET, SPEAKER		124	4-374-829-01	LABEL, PANEL	
110	1-502-509-00	SPEAKER		125	4-308-030-00	WASHER	
111	▲ 1-516-046-11	SWITCH, SLIDE		126	1-452-032-00	MAGNET, DISK; 10MM Ø	
112	*3-701-832-00	HINGE, CIRCUIT BOARD		127	1-452-094-00	MAGNET, ROTATABLE DISK; 15MM Ø	
113	*A-1345-512-A	DA BOARD, COMPLETE		128	1-452-126-11	MAGNET	
114	*4-303-473-00	SUPPORT, PC		129	*4-601-466-11	COVER, 3P INLET	
115	▲ 1-509-547-11	3P INLET					

The components identified by shading and mark ▲ are critical for safety. Replace only with part number specified.

SECTION 7

ELECTRICAL PARTS LIST

BA**NOTE:**

The components identified by shading and mark **A** are critical for safety. Replace only with part number specified.

- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

When indicating parts by reference number, please include the board name.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS

- MF : μ F, PF : μ F

RESISTORS

- All resistors are in ohms
- F : nonflammable

COILS

- MMH : mH, UH : μ H

- The components identified by **X** in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
	*A-1135-287-A	BA BOARD, COMPLETE *****		C313	1-123-333-00	ELECT 100MF 20% 25V	
		CONNECTOR		C323	1-102-129-00	CERAMIC 0.01MF 10% 50V	
BA1	*1-564-441-11	PLUG, CONNECTOR (2.5MM) 5P		C325	1-102-129-00	CERAMIC 0.01MF 10% 50V	
BA2	*1-564-440-11	PLUG, CONNECTOR (2.5MM) 4P		C326	1-102-963-00	CERAMIC 33PF 5% 50V	
BA3	*1-564-440-11	PLUG, CONNECTOR (2.5MM) 4P		C327	1-102-953-00	CERAMIC 18PF 5% 50V	
BA4	*1-564-441-11	PLUG, CONNECTOR (2.5MM) 5P		C328	1-102-129-00	CERAMIC 0.01MF 10% 50V	
BA6	*1-564-442-11	PLUG, CONNECTOR (2.5MM) 6P		C329	1-102-129-00	CERAMIC 0.01MF 10% 50V	
BA7	*1-564-442-11	PLUG, CONNECTOR (2.5MM) 6P		C330	1-102-129-00	CERAMIC 0.01MF 10% 50V	
BA8	*1-564-440-11	PLUG, CONNECTOR (2.5MM) 4P		C331	1-101-880-00	CERAMIC 47PF 5% 50V	
BA9	*1-564-354-00	PLUG, CONNECTOR (2.5MM) 3P		C332	1-101-880-00	CERAMIC 47PF 5% 50V	
BA10	*1-564-353-00	PLUG, CONNECTOR (2.5MM) 2P		C334	1-102-963-00	CERAMIC 33PF 5% 50V	
		CAPACITOR		C335	1-123-607-00	ELECT 0.1MF 20% 50V	
C251	1-102-953-00	CERAMIC 18PF 5% 50V		C336	1-123-380-00	ELECT 1MF 20% 50V	
C253	1-123-333-00	ELECT 100MF 20% 25V		C340	1-101-006-00	CERAMIC 0.047MF 50V	
C254	1-101-004-00	CERAMIC 0.01MF 50V		C343	1-123-356-00	ELECT 10MF 20% 25V	
C255	1-102-662-00	CERAMIC 7PF 0.5PF 50V		C344	1-123-379-00	ELECT 0.47MF 20% 50V	
C256	1-102-662-00	CERAMIC 7PF 0.5PF 50V		C345	1-102-129-00	CERAMIC 0.01MF 10% 50V	
C259	1-123-318-00	ELECT 33MF 20% 16V		C346	1-102-963-00	CERAMIC 33PF 5% 50V	
C260	1-101-361-00	CERAMIC 150PF 5% 50V		C347	1-102-129-00	CERAMIC 0.01MF 10% 50V	
C261	1-123-380-00	ELECT 1MF 20% 50V		C348	1-106-212-00	MYLAR 0.047MF 10% 100V	
C262	1-102-973-00	CERAMIC 100PF 5% 50V		C349	1-106-212-00	MYLAR 0.047MF 10% 100V	
C263	1-123-819-00	ELECT 33MF 20% 25V		C350	1-123-381-00	ELECT 2.2MF 20% 50V	
C264	1-101-006-00	CERAMIC 0.047MF 50V		C351	1-123-369-00	ELECT 4.7MF 20% 50V	
C265	1-101-004-00	CERAMIC 0.01MF 50V		C352	1-123-380-00	ELECT 1MF 20% 50V	
C266	1-101-004-00	CERAMIC 0.01MF 50V		C365	1-102-129-00	CERAMIC 0.01MF 10% 50V	
C267	1-101-004-00	CERAMIC 0.01MF 50V		C366	1-123-382-00	ELECT 3.3MF 20% 50V	
C268	1-101-004-00	CERAMIC 0.01MF 50V		C367	1-101-004-00	CERAMIC 0.01MF 50V	
C269	1-123-318-00	ELECT 33MF 20% 16V		C368	1-102-129-00	CERAMIC 0.01MF 10% 50V	
C281	1-102-811-61	CERAMIC 9PF 1PF 50V		C369	1-123-333-00	ELECT 100MF 20% 25V	
C290	1-102-811-61	CERAMIC 9PF 1PF 50V		C381	1-123-333-00	ELECT 100MF 20% 25V	
C291	1-102-811-61	CERAMIC 9PF 1PF 50V		C382	1-102-129-00	CERAMIC 0.01MF 10% 50V	
C294	1-161-313-00	CERAMIC 150PF 10% 50V		C386	1-102-820-00	CERAMIC 330PF 5% 50V	
C295	1-102-937-00	CERAMIC 4PF 0.5PF 50V		C387	1-102-980-00	CERAMIC 270PF 5% 50V	
C296	1-123-332-00	ELECT 47MF 20% 25V		C388	1-102-820-00	CERAMIC 330PF 5% 50V	
C297	1-101-006-00	CERAMIC 0.047MF 50V				DIODE	
C298	1-123-356-00	ELECT 10MF 20% 16V		D253	A 8-719-911-19	DIODE 1SS119	
C299	1-102-848-00	CERAMIC 180PF 5% 50V		D255	8-719-911-19	DIODE 1SS119	
C300	1-101-006-00	CERAMIC 0.047MF 50V		D257	8-719-911-19	DIODE 1SS119	
C301	1-101-004-00	CERAMIC 0.01MF 50V		D258	8-719-911-19	DIODE 1SS119	
C302	1-101-004-00	CERAMIC 0.01MF 50V				DELAY LINE	
C303	1-106-212-00	MYLAR 0.047MF 10% 100V		DL251	1-415-330-00	DELAY LINE, Y	
C304	1-102-965-00	CERAMIC 39PF 5% 50V				IC	
C305	1-102-937-00	CERAMIC 4PF 0.5PF 50V		IC251	8-752-006-10	IC CX20061	
C306	1-106-212-00	MYLAR 0.047MF 10% 100V		IC253	8-759-113-65	IC UPC1365C	
C307	1-131-368-00	TANTALUM 3.3MF 10% 16V				COIL	
C308	1-123-356-00	ELECT 10MF 20% 16V		L251	1-408-412-00	MICRO INDUCTOR 18UH	
C309	1-102-129-00	CERAMIC 0.01MF 10% 50V		L252	1-409-193-00	COIL 3.58MHZ TRAP	
C310	1-102-129-00	CERAMIC 0.01MF 10% 50V		L254	1-408-424-00	MICRO INDUCTOR 180UH	
C311	1-123-380-00	ELECT 1MF 20% 50V		L256	1-408-418-00	MICRO INDUCTOR 56UH	
C312	1-101-006-00	CERAMIC 0.047MF 50V					

BA

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
L257	1-408-416-00	MICRO INDUCTOR 39UH		R321	1-247-811-00	CARBON 150 5% 1/6W	
L258	1-408-406-00	MICRO INDUCTOR 5.6UH		R322	1-247-837-00	CARBON 1.8K 5% 1/6W	
L259	1-408-415-00	MICRO INDUCTOR 33UH		R323	1-247-827-00	CARBON 680 5% 1/6W	
L260	1-408-415-00	MICRO INDUCTOR 33UH		R324	1-247-825-00	CARBON 560 5% 1/6W	
L261	1-408-415-00	MICRO INDUCTOR 33UH		R326	1-247-823-00	CARBON 470 5% 1/6W	
L262	1-408-414-00	MICRO INDUCTOR 27UH		R327	1-247-839-00	CARBON 2.2K 5% 1/6W	
<u>TRANSISTOR</u>				R328	1-247-855-00	CARBON 10K 5% 1/6W	
Q251	8-729-603-50	TRANSISTOR 2SC403SP		R329	1-247-847-00	CARBON 4.7K 5% 1/6W	
Q252	8-729-245-83	TRANSISTOR 2SC2458		R330	1-247-837-00	CARBON 1.8K 5% 1/6W	
Q253	8-729-245-83	TRANSISTOR 2SC2458		R332	1-247-823-00	CARBON 470 5% 1/6W	
Q254	8-729-245-83	TRANSISTOR 2SC2458		R333	1-247-791-00	CARBON 22 5% 1/6W	
Q256	8-729-245-83	TRANSISTOR 2SC2458		R334	1-247-843-00	CARBON 3.3K 5% 1/6W	
Q257	8-729-603-50	TRANSISTOR 2SC403SP		R335	1-247-839-00	CARBON 2.2K 5% 1/6W	
Q258	8-729-117-52	TRANSISTOR 2SA1175-J		R336	1-247-823-00	CARBON 470 5% 1/6W	
Q259	8-729-178-52	TRANSISTOR 2SC2785-J		R337	1-247-827-00	CARBON 680 5% 1/6W	
Q270	8-729-603-50	TRANSISTOR 2SC403SP		R338	1-247-853-00	CARBON 8.2K 5% 1/6W	
Q271	8-729-245-83	TRANSISTOR 2SC2458		R339	1-247-855-00	CARBON 10K 5% 1/6W	
Q272	8-729-245-83	TRANSISTOR 2SC2458		R340	1-247-839-00	CARBON 2.2K 5% 1/6W	
Q273	8-729-603-50	TRANSISTOR 2SC403SP		R341	1-247-807-00	CARBON 100 5% 1/6W	
Q274	8-729-245-83	TRANSISTOR 2SC2458		R342	1-247-807-00	CARBON 100 5% 1/6W	
Q278	8-729-115-30	TRANSISTOR 2SK105A-30		R343	1-247-883-00	CARBON 150K 5% 1/6W	
Q279	8-729-245-83	TRANSISTOR 2SC2458		R344	1-247-855-00	CARBON 10K 5% 1/6W	
<u>RESISTOR</u>				R345	1-247-843-00	CARBON 3.3K 5% 1/6W	
R251	1-247-867-00	CARBON 33K 5% 1/6W		R346	1-247-791-00	CARBON 22 5% 1/6W	
R252	1-247-851-00	CARBON 6.8K 5% 1/6W		R366	1-247-869-00	CARBON 39K 5% 1/6W	
R253	1-247-825-00	CARBON 560 5% 1/6W		R367	1-247-849-00	CARBON 5.6K 5% 1/6W	
R254	1-247-833-00	CARBON 1.2K 5% 1/6W		R369	1-247-867-00	CARBON 33K 5% 1/6W	
R257	1-247-831-00	CARBON 1K 5% 1/6W		R370	1-247-875-00	CARBON 68K 5% 1/6W	
R258	1-247-807-00	CARBON 100 5% 1/6W		R371	1-247-867-00	CARBON 33K 5% 1/6W	
R259	1-247-835-00	CARBON 1.5K 5% 1/6W		R372	1-247-865-00	CARBON 27K 5% 1/6W	
R260	1-247-835-00	CARBON 1.5K 5% 1/6W		R373	1-247-873-00	CARBON 56K 5% 1/6W	
R261	1-247-831-00	CARBON 1K 5% 1/6W		R374	1-247-823-00	CARBON 470 5% 1/6W	
R262	1-247-831-00	CARBON 1K 5% 1/6W		R375	1-247-827-00	CARBON 680 5% 1/6W	
R263	1-247-819-00	CARBON 330 5% 1/6W		R376	1-247-831-00	CARBON 1K 5% 1/6W	
R264	1-247-855-00	CARBON 10K 5% 1/6W		R377	1-247-835-00	CARBON 1.5K 5% 1/6W	
R265	1-247-867-00	CARBON 33K 5% 1/6W		R378	1-247-887-00	CARBON 220K 5% 1/6W	
R270	1-247-831-00	CARBON 1K 5% 1/6W		R379	1-247-827-00	CARBON 680 5% 1/6W	
R271	1-247-807-00	CARBON 100 5% 1/6W		R381	1-247-863-00	CARBON 22K 5% 1/6W	
R272	1-247-835-00	CARBON 1.5K 5% 1/6W		R382	1-247-867-00	CARBON 33K 5% 1/6W	
R273	1-247-807-00	CARBON 100 5% 1/6W		R383	1-247-831-00	CARBON 1K 5% 1/6W	
R274	1-247-831-00	CARBON 1K 5% 1/6W		R395	1-247-857-00	CARBON 12K 5% 1/6W	
R275	1-247-819-00	CARBON 330 5% 1/6W		R396	1-247-863-00	CARBON 22K 5% 1/6W	
R276	1-247-819-00	CARBON 330 5% 1/6W		R397	1-247-823-00	CARBON 470 5% 1/6W	
R277	1-247-873-00	CARBON 56K 5% 1/6W		R398	1-247-831-00	CARBON 1K 5% 1/6W	
R278	1-247-877-00	CARBON 82K 5% 1/6W		R399	1-247-839-00	CARBON 2.2K 5% 1/6W	
R279	1-247-807-00	CARBON 100 5% 1/6W		R400	1-247-865-00	CARBON 27K 5% 1/6W	
R280	1-247-861-00	CARBON 18K 5% 1/6W		R401	1-247-865-00	CARBON 27K 5% 1/6W	
R281	1-247-855-00	CARBON 10K 5% 1/6W		R402	1-247-877-00	CARBON 82K 5% 1/6W	
R282	1-247-807-00	CARBON 100 5% 1/6W		R406	1-247-821-00	CARBON 390 5% 1/6W	
R283	1-247-867-00	CARBON 33K 5% 1/6W		R408	1-247-821-00	CARBON 390 5% 1/6W	
R320	1-247-843-00	CARBON 3.3K 5% 1/6W		R410	1-247-821-00	CARBON 390 5% 1/6W	
				R411	1-247-871-00	CARBON 47K 5% 1/6W	
				R437	1-247-845-00	CARBON 3.9K 5% 1/6W	

The components identified by shading and mark Δ are critical for safety. Replace only with part number specified.

BA BB

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
R438	1-247-823-00	CARBON 470 5% 1/6W		C318	1-102-119-00	CERAMIC 0.0015MF 10% 50V	
R439	1-247-791-00	CARBON 22 5% 1/6W		C319	1-102-971-00	CERAMIC 82PF 5% 50V	
R440	1-247-147-00	CARBON 4.7K 5% 1/4W		C320	1-106-184-00	MYLAR 0.0033MF 10% 100V	
R441	1-247-831-00	CARBON 1K 5% 1/6W		C321	1-101-361-00	CERAMIC 150PF 5% 50V	
R442	1-247-845-00	CARBON 3.9K 5% 1/6W		C322	1-106-188-00	MYLAR 0.0047MF 10% 100V	
R443	1-247-823-00	CARBON 470 5% 1/6W		C353	1-123-356-00	ELECT 10MF 20% 25V	
R444	1-247-809-00	CARBON 120 5% 1/6W		C354	1-101-888-00	CERAMIC 68PF 5% 50V	
R445	1-247-147-00	CARBON 4.7K 5% 1/4W		C355	1-102-129-00	CERAMIC 0.01MF 10% 50V	
R446	1-247-831-00	CARBON 1K 5% 1/6W		C395	1-123-356-00	ELECT 10MF 20% 25V	
R447	1-247-845-00	CARBON 3.9K 5% 1/6W		C396	1-108-599-00	MYLAR 0.068MF 5% 50V	
R448	1-247-823-00	CARBON 470 5% 1/6W		C397	1-102-973-00	CERAMIC 100PF 5% 50V	
R449	1-247-791-00	CARBON 22 5% 1/6W					
R450	1-247-147-00	CARBON 4.7K 5% 1/4W					
R451	1-247-831-00	CARBON 1K 5% 1/6W					
R452	1-247-847-00	CARBON 4.7K 5% 1/6W					
R456	1-247-841-00	CARBON 2.7K 5% 1/6W					
R457	1-247-849-00	CARBON 5.6K 5% 1/6W					
R465	1-247-867-00	CARBON 33K 5% 1/6W					
VARIABLE RESISTOR							
RV252	1-228-723-00	RES, ADJ, CERAMIC CARBON 4.7K					
RV253	1-228-719-00	RES, ADJ, CERAMIC CARBON 470					
RV254	1-228-722-00	RES, ADJ, CERAMIC CARBON 3.3K					
RV255	1-228-722-00	RES, ADJ, CERAMIC CARBON 3.3K					
RV256	1-228-725-00	RES, ADJ, CERAMIC CARBON 22K					
RV258	1-224-660-21	RES, ADJ, METAL FILM 1K					
RV259	1-224-493-00	RES, ADJ, METAL FILM 10K					
RV260	1-224-660-21	RES, ADJ, METAL FILM 1K					
RV261	1-224-493-00	RES, ADJ, METAL FILM 10K					
RV262	1-224-660-21	RES, ADJ, METAL FILM 1K					
RV263	1-224-493-00	RES, ADJ, METAL FILM 10K					
RV264	1-228-720-00	RES, ADJ, CERAMIC CARBON 1K					
TRANSFORMER							
T256	1-425-794-00	BPT-2					
T257	1-405-372-00	COIL BAT					
CRYSTAL							
X251	1-527-396-00	CRYSTAL, OSC					

*A-1135-288-A BB BOARD, COMPLETE							

CONNECTOR							
BB1	*1-564-354-00	PLUG, CONNECTOR (2.5MM) 3P					
BB2	*1-564-440-11	PLUG, CONNECTOR (2.5MM) 4P					
CAPACITOR							
C314	1-123-333-00	ELECT 100MF 20% 25V					
C315	1-123-333-00	ELECT 100MF 20% 25V					
C317	1-123-381-00	ELECT 2.2MF 20% 50V					
C318	1-102-119-00	CERAMIC 0.0015MF 10% 50V					
C319	1-102-971-00	CERAMIC 82PF 5% 50V					
C320	1-106-184-00	MYLAR 0.0033MF 10% 100V					
C321	1-101-361-00	CERAMIC 150PF 5% 50V					
C322	1-106-188-00	MYLAR 0.0047MF 10% 100V					
C353	1-123-356-00	ELECT 10MF 20% 25V					
C354	1-101-888-00	CERAMIC 68PF 5% 50V					
C355	1-102-129-00	CERAMIC 0.01MF 10% 50V					
C395	1-123-356-00	ELECT 10MF 20% 25V					
C396	1-108-599-00	MYLAR 0.068MF 5% 50V					
C397	1-102-973-00	CERAMIC 100PF 5% 50V					
IC							
IC254	8-759-240-11	IC TC4011BP					
IC255	8-759-345-38	IC HD14538BP					
COIL							
L260	1-408-417-00	MICRO INDUCTOR 47UH					
TRANSISTOR							
Q275	8-729-603-50	TRANSISTOR 2SC403SP					
Q276	8-729-245-83	TRANSISTOR 2SC2458					
Q277	8-729-204-83	TRANSISTOR 2SA1048GR					
Q278	8-729-245-83	TRANSISTOR 2SC2458					
RESISTOR							
R347	1-247-863-00	CARBON 22K 5% 1/6W					
R348	1-247-841-00	CARBON 2.7K 5% 1/6W					
R349	1-247-831-00	CARBON 1K 5% 1/6W					
R350	1-247-831-00	CARBON 1K 5% 1/6W					
R352	1-247-817-00	CARBON 270 5% 1/6W					
R353	1-247-831-00	CARBON 1K 5% 1/6W					
R355	1-247-865-00	CARBON 27K 5% 1/6W					
R356	1-247-893-00	CARBON 390K 5% 1/6W					
R357	1-247-823-00	CARBON 470 5% 1/6W					
R358	1-247-865-00	CARBON 27K 5% 1/6W					
R359	1-247-847-00	CARBON 4.7K 5% 1/6W					
R360	1-247-841-00	CARBON 2.7K 5% 1/6W					
R361	1-247-863-00	CARBON 22K 5% 1/6W					
R362	1-247-859-00	CARBON 15K 5% 1/6W					
R363	1-247-841-00	CARBON 2.7K 5% 1/6W					
R364	1-247-871-00	CARBON 47K 5% 1/6W					
R365	1-247-839-00	CARBON 2.2K 5% 1/6W					
R384	1-247-867-00	CARBON 33K 5% 1/6W					
R388	1-247-841-00	CARBON 2.7K 5% 1/6W					
R389	1-247-839-00	CARBON 2.2K 5% 1/6W					
R459	1-247-831-00	CARBON 1K 5% 1/6W					
R461	1-247-831-00	CARBON 1K 5% 1/6W					
R462	1-247-879-00	CARBON 100K 5% 1/6W					
R463	1-247-107-00	CARBON 100 5% 1/4W					

BB **FA** **FC** **FB**

Ref.No.	Part No.	Description	Remark
<u>VARIABLE RESISTOR</u>			
RV265	1-226-773-00	RES, ADJ, METAL GLAZE 22K	
RV266	1-226-775-00	RES, ADJ, METAL GLAZE 100K	

	*1-614-503-11	FA BOARD	

<u>CAPACITOR</u>			
C600	<u>A</u> 1-108-745-12	MYLAR 0.22MF 20% 125V	
	*4-316-137-00	COVER, CAPACITOR; C600	
<u>FUSE</u>			
F601	<u>A</u> 1-532-557-11	FUSE, GLASS TUBE 3.15A	
	1-533-087-00	HOLDER, FUSE; F601	
F602	<u>A</u> 1-532-579-11	FUSE, GLASS TUBE 4A	
	1-533-087-00	HOLDER, FUSE; F602	
<u>CONNECTOR</u>			
FA1	*1-508-765-00	3P PLUG (M)	
FA2	*1-508-786-00	2P PLUG (M)	
FA4	*1-508-765-00	3P PLUG (M)	
FA5	*1-564-354-00	PLUG, CONNECTOR (2.5MM) 3P	
FA6	*1-564-442-11	PLUG, CONNECTOR (2.5MM) 6P	
FA7	*1-564-354-00	PLUG, CONNECTOR (2.5MM) 3P	
FA8	*1-564-353-00	PLUG, CONNECTOR (2.5MM) 2P	
FA9	*1-564-354-21	PLUG, CONNECTOR (2.5MM) 3P	
FA10	*1-564-354-00	PLUG, CONNECTOR (2.5MM) 3P	
FA11	*1-564-353-00	PLUG, CONNECTOR (2.5MM) 2P	
FA12	*1-564-353-00	PLUG, CONNECTOR (2.5MM) 2P	
<u>RESISTOR</u>			
R600	1-202-724-00	SOLID 2.7M 10% 1/2W	
R601	1-247-824-00	CARBON 510 5% 1/6W	
R602	1-247-831-00	CARBON 1K 5% 1/6W	
R603	1-247-837-00	CARBON 1.8K 5% 1/6W	
R604	1-202-727-00	SOLID 4.7M 10% 1/2W	

	*1-614-504-11	FC BOARD	

	3-618-225-00	NUT, PLATE	
	*4-026-251-00	SPACER, INSULATING	
	4-313-734-00	BUSHING TR, Y	
<u>CAPACITOR</u>			
C660	1-161-047-00	CERAMIC 0.0047MF 10% 25V	
C670	1-161-047-00	CERAMIC 0.0047MF 10% 25V	
<u>DIODE</u>			
D660	8-719-102-84	DIODE RD8.2E-N2	

Ref.No.	Part No.	Description	Remark
D661	8-719-102-90	DIODE RD10E-N2	
D662	8-719-911-19	DIODE 1SS119	
D663	8-719-911-55	DIODE U05G	
D664	8-719-920-40	DIODE ESAC82-004	
D670	8-719-102-84	DIODE RD8.2E-N2	
D671	8-719-102-90	DIODE RD10E-N2	
D672	8-719-911-19	DIODE 1SS119	
D673	8-719-911-55	DIODE U05G	
<u>CONNECTOR</u>			
FC1	*1-564-354-21	PLUG, CONNECTOR (2.5MM) 3P	
FC2	*1-564-353-00	PLUG, CONNECTOR (2.5MM) 2P	
FC3	*1-564-354-00	PLUG, CONNECTOR (2.5MM) 3P	
FC4	*1-564-354-00	PLUG, CONNECTOR (2.5MM) 3P	
<u>TRANSISTOR</u>			
Q660	8-729-313-42	TRANSISTOR 2SD1134	
Q661	8-729-204-83	TRANSISTOR 2SA1048GR	
Q662	8-729-204-83	TRANSISTOR 2SA1048GR	
Q670	8-729-313-42	TRANSISTOR 2SD1134	
Q671	8-729-204-83	TRANSISTOR 2SA1048GR	
Q672	8-729-204-83	TRANSISTOR 2SA1048GR	
<u>RESISTOR</u>			
R660	<u>A</u> 1-212-361-61	METAL OXIDE 1.2 5% 1W F	
R661	1-247-831-00	CARBON 1K 5% 1/6W	
R662	1-247-855-00	CARBON 10K 5% 1/6W	
R664	1-247-839-00	CARBON 2.2K 5% 1/6W	
R665	1-247-819-00	CARBON 330 5% 1/6W	
R670	<u>A</u> 1-212-361-61	METAL OXIDE 1.2 5% 1W F	
R671	1-247-831-00	CARBON 1K 5% 1/6W	
R672	1-247-855-00	CARBON 10K 5% 1/6W	
R674	1-247-839-00	CARBON 2.2K 5% 1/6W	
R675	1-247-819-00	CARBON 330 5% 1/6W	

	*A-1245-256-A	FB BOARD, COMPLETE	

	*2-430-232-00	INSULATOR (SR12E), TRANSISTOR	
	*4-374-844-01	HEAT SINK (SRT)	
	*4-374-845-01	BAND (SRT)	
	*4-374-846-01	COVER, CAPACITOR, CAP TYPE	
	*4-374-846-11	COVER, CAPACITOR, CAP TYPE	
<u>CAPACITOR</u>			
C606	<u>A</u> 1-136-345-51	FILM 0.1MF 20% 125V	
C607	<u>A</u> 1-161-742-51	CERAMIC 0.0022MF 20% 125V	
C608	<u>A</u> 1-161-742-51	CERAMIC 0.0022MF 20% 125V	
C609	<u>A</u> 1-161-742-51	CERAMIC 0.0022MF 20% 125V	
C610	<u>A</u> 1-161-742-51	CERAMIC 0.0022MF 20% 125V	
C611	<u>A</u> 1-161-742-51	CERAMIC 0.0022MF 20% 125V	
C612	<u>A</u> 1-161-742-51	CERAMIC 0.0022MF 20% 125V	
C613	<u>A</u> 1-161-742-51	CERAMIC 0.0022MF 20% 125V	

The components identified by shading and mark A are critical for safety. Replace only with part number specified.

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Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
C614	1-161-742-00	CERAMIC 0.0022MF 20%	400V	TRANSISTOR			
C615	1-161-742-51	CERAMIC 0.0022MF 20%	125V	Q610	8-729-801-75	TRANSISTOR 2SD1403	
C616	1-125-392-11	ELECT(BLOCK) 220MF 20%	200V	Q611	8-729-177-43	TRANSISTOR 2SD774	
C617	1-136-173-00	FILM 0.47MF 5%	50V	Q612	8-729-177-43	TRANSISTOR 2SD774	
C618	1-123-356-00	ELECT 10MF 20%	25V	Q613	8-729-245-83	TRANSISTOR 2SC2458	
C619	1-108-587-00	MYLAR 0.022MF 10%	50V	Q614	8-729-245-83	TRANSISTOR 2SC2458	
C620	1-161-328-00	CERAMIC 0.0047MF 30%	50V	RESISTOR			
C621	1-123-356-00	ELECT 10MF 20%	16V	R611	1-206-670-00	METAL OXIDE 1.8K 5% 2W	F
C622	1-124-440-11	ELECT 3300MF 20%	25V	R612	1-247-155-00	CARBON 10K 5% 1/4W	
C623	1-108-833-00	MYLAR 0.0047MF 10%	50V	R613	1-244-929-00	CARBON 220K 5% 1/2W	
C624	1-123-356-00	ELECT 10MF 20%	25V	R614	1-247-807-00	CARBON 100 5% 1/6W	
C625	1-106-180-00	MYLAR 0.0022MF 10%	50V	R615	1-247-827-00	CARBON 680 5% 1/6W	
C626	1-102-074-00	CERAMIC 0.001MF 10%	50V	R616	1-247-034-11	CARBON 220 5% 1/8W	F
C627	1-123-356-00	ELECT 10MF 20%	16V	R617	1-247-847-00	CARBON 4.7K 5% 1/6W	
C628	1-123-356-00	ELECT 10MF 20%	25V	R618	1-247-847-00	CARBON 4.7K 5% 1/6W	
C629	1-123-381-00	ELECT 2.2MF 20%	50V	R619	1-247-865-00	CARBON 27K 5% 1/6W	
C630	1-123-330-00	ELECT 22MF 20%	16V	R620	1-247-853-00	CARBON 8.2K 5% 1/6W	
C631	1-123-335-00	ELECT 330MF 20%	25V	R621	1-247-847-00	CARBON 4.7K 5% 1/6W	
C632	1-130-806-00	FILM 0.1MF 10%	400V	R622	1-247-839-00	CARBON 2.2K 5% 1/6W	
C633	1-102-074-00	CERAMIC 0.001MF 10%	50V	R623	1-247-879-00	CARBON 100K 5% 1/6W	
DIODE				R624	1-247-839-00	CARBON 2.2K 5% 1/6W	
D610	8-719-300-63	DIODE LB-156		R625	1-213-131-00	METAL OXIDE 100 5% 1W	F
D611	8-719-924-06	DIODE ERC24-06S		R627	1-215-443-00	METAL 8.2K 1% 1/6W	
D612	8-719-102-74	DIODE RD6.2E-N2		R628	1-215-451-00	METAL 18K 1% 1/6W	
D613	8-719-901-93	DIODE V19E		R629	1-215-447-00	METAL 12K 1% 1/6W	
D614	8-719-911-19	DIODE 1SS119		R630	1-247-849-00	CARBON 5.6K 5% 1/6W	
D615	9-983-560-01	DIODE ERC88-009		R631	1-247-849-00	CARBON 5.6K 5% 1/6W	
D616	8-719-102-90	DIODE RD10E-N2		R632	1-215-429-00	METAL 2.2K 1% 1/6W	
D617	8-719-102-74	DIODE RD6.2E-N2		R633	1-215-401-31	METAL 150 1% 1/6W	
D618	8-719-911-19	DIODE 1SS119		R634	1-215-429-00	METAL 2.2K 1% 1/6W	
D619	8-729-101-31	TRANSISTOR N13T1		R635	1-247-855-00	CARBON 10K 5% 1/6W	
D620	8-719-911-19	DIODE 1SS119		R636	1-247-855-00	CARBON 10K 5% 1/6W	
D621	8-719-911-19	DIODE 1SS119		R637	1-247-879-00	CARBON 100K 5% 1/6W	
D622	8-719-911-19	DIODE 1SS119		R638	1-247-847-00	CARBON 4.7K 5% 1/6W	
D623	8-719-911-19	DIODE 1SS119		R639	1-247-843-00	CARBON 3.3K 5% 1/6W	
D624	8-719-911-19	DIODE 1SS119		R640	1-247-855-00	CARBON 10K 5% 1/6W	
D625	8-719-924-06	DIODE ERC24-06S		R641	1-247-839-00	CARBON 2.2K 5% 1/6W	
D626	8-719-103-21	DIODE RD20E-N2		R642	1-247-867-00	CARBON 33K 5% 1/6W	
CONNECTOR				R643	1-247-847-00	CARBON 4.7K 5% 1/6W	
FB1	*1-508-765-00	3P PLUG (M)		R644	1-247-847-00	CARBON 4.7K 5% 1/6W	
FB2	*1-564-454-11	PLUG, CONNECTOR (2.5MM) 6P		R645	1-247-034-00	CARBON 220 5% 1/8W	F
IC				R646	1-247-825-00	CARBON 560 5% 1/6W	
IC611	8-759-906-62	IC MB3759-SNY		R647	1-205-616-11	CEMENTED 1 5% 5W	
IC612	8-759-729-03	IC NJM2903D		R648	1-213-160-00	METAL OXIDE 27K 5% 1W	F
COIL				R649	1-213-160-00	METAL OXIDE 27K 5% 1W	F
L611	1-408-412-00	MICRO INDUCTOR 18UH		R650	1-247-847-00	CARBON 4.7K 5% 1/6W	
L612	1-407-365-00	COIL, CHOKE		R651	1-247-831-00	CARBON 1K 5% 1/6W	
				VARIABLE RESISTOR			
				RV610	1-230-231-11	RES, ADJ, CERAMIC CARBON 2.2K	
				RV611	1-230-230-00	RES, ADJ, CERAMIC CARBON 1K	

The components identified by shading and mark Δ are critical for safety. Replace only with part number specified.

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Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
				<u>IC</u>			
<u>RELAY</u>							
RY610	1-515-559-11	RELAY, POWER		IC201	8-752-006-10	IC CX20061	
				IC202	8-759-400-01	IC AN5250	
<u>TRANSFORMER</u>				<u>CONNECTOR</u>			
T609	1-421-400-11	COIL, LINE FILTER		Q1	*1-564-441-11	PLUG, CONNECTOR (2.5MM) 5P	
T610	1-421-400-11	COIL, LINE FILTER		Q2	*1-564-354-00	PLUG, CONNECTOR (2.5MM) 3P	
T611	1-448-108-11	TRANSFORMER, CONVERTER (SRT)		Q3	*1-564-353-00	PLUG, CONNECTOR (2.5MM) 2P	
T612	1-437-173-11	TRANSFORMER, DRIVE		Q4	*1-564-353-00	PLUG, CONNECTOR (2.5MM) 2P	
				Q5	1-562-212-00	CONNECTOR, DIN 6P	
<u>VARISTOR</u>				Q6	1-536-899-11	TERMINAL BOARD, INPUT/OUTPUT	
VDR610	1-807-180-11	VARISTOR SNR-14A300K		<u>TRANSISTOR</u>			
*****				Q201	8-729-245-83	TRANSISTOR 2SC2458	
*A-1270-154-A Q BOARD, COMPLETE				Q202	8-729-245-83	TRANSISTOR 2SC2458	
*****				Q203	8-729-245-83	TRANSISTOR 2SC2458	
				Q204	8-729-204-83	TRANSISTOR 2SA1048GR	
				Q205	8-729-204-83	TRANSISTOR 2SA1048GR	
<u>CAPACITOR</u>				Q206	8-729-177-43	TRANSISTOR 2SD774-4	
C201	1-123-333-00	ELECT	100MF 20% 25V	Q207	8-729-178-52	TRANSISTOR 2SC2785-J	
C202	1-101-006-00	CERAMIC	0.047MF 20% 50V	Q208	8-729-245-83	TRANSISTOR 2SC2458	
C203	1-123-356-00	ELECT	10MF 20% 25V	<u>RESISTOR</u>			
C204	1-123-318-00	ELECT	33MF 20% 16V	R201	1-215-394-00	METAL 75 1% 1/6W	
C205	1-123-318-00	ELECT	33MF 20% 16V	R202	1-247-131-00	CARBON 1K 5% 1/4W	
C206	1-123-333-00	ELECT	100MF 20% 25V	R203	1-247-875-00	CARBON 68K 5% 1/6W	
C208	1-123-356-00	ELECT	10MF 20% 25V	R204	1-247-873-00	CARBON 56K 5% 1/6W	
C209	1-123-318-00	ELECT	33MF 20% 16V	R205	1-247-831-00	CARBON 1K 5% 1/6W	
C210	1-123-356-00	ELECT	10MF 20% 25V	R206	1-247-807-00	CARBON 100 5% 1/6W	
C211	1-101-006-00	CERAMIC	0.047MF 50V	R207	1-247-875-00	CARBON 68K 5% 1/6W	
C212	1-101-006-00	CERAMIC	0.047MF 50V	R208A	1-215-394-00	METAL 75 1% 1/6W	
C213	1-123-380-00	ELECT	1MF 20% 50V	R209	1-247-131-00	CARBON 1K 5% 1/4W	
C214	1-123-380-00	ELECT	1MF 20% 50V	R210	1-247-873-00	CARBON 56K 5% 1/6W	
C215	1-123-334-00	ELECT	220MF 20% 25V	R211	1-247-807-00	CARBON 100 5% 1/6W	
C217	1-101-006-00	CERAMIC	0.047MF 50V	R212	1-247-831-00	CARBON 1K 5% 1/6W	
C218	1-123-382-00	ELECT	3.3MF 20% 50V	R213	1-247-831-00	CARBON 1K 5% 1/6W	
C219	1-123-356-00	ELECT	10MF 20% 25V	R214	1-247-799-00	CARBON 47 5% 1/6W	
C220	1-123-356-00	ELECT	10MF 20% 25V	R215	1-247-849-00	CARBON 5.6K 5% 1/6W	
C221	1-101-006-00	CERAMIC	0.047MF 50V	R216	1-247-843-00	CARBON 3.3K 5% 1/6W	
C222	1-123-321-00	ELECT	220MF 20% 16V	R217	1-247-855-00	CARBON 10K 5% 1/6W	
C223	1-123-321-00	ELECT	220MF 20% 16V	R218	1-247-893-00	CARBON 390K 5% 1/6W	
C224	1-123-333-00	ELECT	100MF 20% 16V	R219	1-247-889-00	CARBON 270K 5% 1/6W	
C225	1-123-318-00	ELECT	33MF 20% 16V	R220	1-247-889-00	CARBON 270K 5% 1/6W	
C226	1-123-318-00	ELECT	33MF 20% 16V	R221	1-247-855-00	CARBON 10K 5% 1/6W	
C228	1-102-129-00	CERAMIC	0.01MF 10% 50V	R222	1-247-855-00	CARBON 10K 5% 1/6W	
C229	1-123-380-00	ELECT	1MF 20% 50V	R223	1-247-893-00	CARBON 390K 5% 1/6W	
C231	1-101-004-00	CERAMIC	0.01MF 50V	R224	1-247-889-00	CARBON 270K 5% 1/6W	
C232	1-123-330-00	ELECT	22MF 20% 25V	R225	1-247-889-00	CARBON 270K 5% 1/6W	
<u>DIODE</u>				R226	1-247-831-00	CARBON 1K 5% 1/6W	
D201	8-719-100-65	DIODE RD12E-B2		R227	1-247-839-00	CARBON 2.2K 5% 1/6W	
D202	8-719-911-19	DIODE 1SS119		R228	1-247-841-00	CARBON 2.7K 5% 1/6W	
D203	8-719-100-65	DIODE RD12E-B2		R229	1-247-803-00	CARBON 68 5% 1/6W	
D204	8-719-911-19	DIODE 1SS119					
D205	8-719-911-19	DIODE 1SS119					

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Q C DB DC

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
R230	A 1-246-981-11	CARBON	4.7 5% 1/8W F	R707	1-247-815-00	CARBON	220 5% 1/6W
R232	A 1-247-823-31	CARBON	470 5% 1/4W	R709	1-202-822-00	SOLID	2.2K 10% 1/2W
R233	A 1-247-823-31	CARBON	470 5% 1/4W	R710	1-213-156-00	METAL OXIDE	12K 5% 1W F
R234	1-247-863-00	CARBON	22K 5% 1/6W	R711	1-202-822-00	SOLID	2.2K 10% 1/2W
R235	1-247-807-00	CARBON	100 5% 1/6W	R712	1-247-815-00	CARBON	220 5% 1/6W
R236	1-247-849-00	CARBON	5.6K 5% 1/6W	R714	1-213-156-00	METAL OXIDE	12K 5% 1W F
R237	1-247-876-00	CARBON	75K 5% 1/6W	R715	1-202-822-00	SOLID	2.2K 10% 1/2W
R238	1-247-849-00	CARBON	5.6K 5% 1/6W	R716	1-247-815-00	CARBON	220 5% 1/6W
R239	1-247-876-00	CARBON	75K 5% 1/6W			VARIABLE RESISTOR	
R240	A 1-212-851-11	FUSIBLE	5.6 5% 1/4W F	RV701	1-230-164-21	RES, ADJ, METAL GLAZE 55M	
R242	A 1-213-052-51	FUSIBLE	4.7 5% 1W F			SPARK GAP	
		SWITCH		SG701	1-519-063-XX	DISCHARGING GAP	
S201	1-553-725-00	SWITCH, SLIDE				*****	
S202	1-553-725-00	SWITCH, SLIDE					

	*A-1330-584-A	C BOARD, COMPLETE	*****		*1-614-502-11	DB BOARD	*****
	1-526-691-00	SOCKET, CRT				CONNECTOR	
		CONNECTOR		DB1	*1-564-353-00	PLUG, CONNECTOR (2.5MM) 2P	
C1	*1-564-442-11	PLUG, CONNECTOR (2.5MM) 6P		DB2	*1-564-445-11	PLUG, CONNECTOR (2.5MM) 9P	
C2	*1-564-353-00	PLUG, CONNECTOR (2.5MM) 2P				*****	
C3	*1-564-354-00	PLUG, CONNECTOR (2.5MM) 3P			*1-614-498-11	DC BOARD	*****
C4	*1-564-354-00	PLUG, CONNECTOR (2.5MM) 3P				CAPACITOR	
		CAPACITOR					
C701	1-102-223-00	CERAMIC	0.0047MF 10% 2KV	C890	1-123-332-00	ELECT	47MF 20% 16V
C703	1-102-050-00	CERAMIC	0.01MF 500V	C891	1-130-794-00	FILM	0.22MF 10% 250V
C704	1-123-933-00	ELECT	10MF 20% 160V	C892	1-130-800-00	FILM	2.2MF 10% 250V
		COIL				DIODE	
L701	A 1-407-704-11	MICRO INDUCTOR 82UH		D890	8-719-102-74	DIODE RD6.2E-N2	
L702	1-407-709-00	MICRO INDUCTOR 220UH		D891	A 8-719-000-24	THYRISTOR CRO2AM-4	
		NEON LAMP		D892	8-719-911-55	DIODE U05G	
NE702	1-519-013-13	DISCHARGE TUBE				CONNECTOR	
NE703	1-519-013-13	DISCHARGE TUBE		DC1	*1-564-354-00	PLUG, CONNECTOR (2.5MM) 3P	
NE704	1-519-013-13	DISCHARGE TUBE		DC2	*1-560-278-00	PLUG, CONNECTOR 3P	
NL701	1-519-108-XX	LAMP, NEON ASSY				TRANSISTOR	
		TRANSISTOR		Q890	8-765-620-00	TRANSISTOR 2SD1015	
Q701	8-729-326-11	TRANSISTOR 2SC2611				RESISTOR	
Q702	8-729-326-11	TRANSISTOR 2SC2611		R895	1-202-846-00	SOLID	470K 1/2W
Q703	8-729-326-11	TRANSISTOR 2SC2611		R896	1-247-871-00	CARBON	47K 5% 1/6W
		RESISTOR		R898	1-247-817-00	CARBON	270 5% 1/6W
R701	1-202-842-11	SOLID	220K 10% 1/2W	R899	A 1-246-996-11	CARBON	2.2K 5% 1/8W F
R702	1-202-719-00	SOLID	1M 10% 1/2W	R900	1-246-517-25	CARBON	68K 5% 1/4W
R703	1-202-838-00	SOLID	100K 10% 1/2W				
R706	1-213-156-00	METAL OXIDE	12K 5% 1W F				

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DD DA

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
*1-615-160-11	DD BOARD *****			C840	1-102-832-00	CERAMIC 330PF 10% 50V	
				C841	1-123-360-00	ELECT 100MF 20% 50V	
				C842	1-123-335-00	ELECT 330MF 20% 25V	
*1-564-451-11	PLUG, CONNECTOR (2.5MM) 3P			C843	1-108-837-00	MYLAR 0.01MF 10% 50V	
				C844	1-102-030-51	CERAMIC 330PF 10% 500V	
<u>CAPACITOR</u>							
C870	1-161-328-00	CERAMIC 0.0047MF 30% 50V		C845	1-136-337-11	FILM 3.3MF 10% 100V	
				C846	1-124-258-00	ELECT 3.3MF 20% 25V	
				C850	1-123-356-00	ELECT 10MF 20% 25V	
				C851	1-106-176-00	MYLAR 0.0015MF 5% 50V	
				C853	1-106-180-00	MYLAR 0.0022MF 5% 50V	
				C854	1-102-529-00	CERAMIC 100PF 5% 50V	
				C855	1-123-356-00	ELECT 10MF 20% 16V	
				C856	1-102-973-00	CERAMIC 100PF 10% 50V	
				C857	1-102-038-51	CERAMIC 0.001MF 500V	
				C860	1-123-381-00	ELECT 2.2MF 20% 50V	
				C862	1-102-074-00	CERAMIC 0.001MF 10% 50V	
				C863	1-123-380-00	ELECT 1MF 20% 50V	
				C864	1-124-537-51	ELECT 1200MF 20% 35V	
				C866	1-102-074-00	CERAMIC 0.001MF 10% 50V	
				C867	1-101-002-00	CERAMIC 0.0022MF 50V	

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DA

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
DA2	*1-564-353-00	PLUG, CONNECTOR (2.5MM) 2P		R815	1-247-851-00	CARBON 6.8K 5% 1/6W	
DA3	*1-564-442-11	PLUG, CONNECTOR (2.5MM) 6P		R816	1-247-855-00	CARBON 10K 5% 1/6W	
DA4	*1-564-353-00	PLUG, CONNECTOR (2.5MM) 2P		R818	1-247-855-00	CARBON 10K 5% 1/6W	
DA5	*1-508-765-00	3P PLUG (M)		R819	1-215-461-00	METAL 47K 1% 1/6W	
DA6	*1-564-354-00	PLUG, CONNECTOR (2.5MM) 3P		R820	1-215-451-00	METAL 18K 1% 1/6W	
DA7	*1-564-445-11	PLUG, CONNECTOR (2.5MM) 9P		R821	1-247-879-00	CARBON 100K 5% 1/6W	
DA8	*1-564-354-00	PLUG, CONNECTOR (2.5MM) 3P		R822	1-213-143-00	METAL OXIDE 1K 5% 1W F	
<u>IC</u>				R824	△ 1-247-023-11	CARBON 2.2 5% 1/8W F	
IC800	8-759-100-60	IC UPC1377C		R825	△ 1-246-979-11	CARBON 1.2 5% 1/8W F	
IC801	8-759-113-78	IC UPC1378H-L		R826	1-215-445-00	METAL 10K 1% 1/6W	
IC802	8-759-145-58	IC UPC4558C		R827	1-213-149-00	METAL OXIDE 3.3K 5% 1W F	
IC803	8-759-240-30	IC TC4030BP		R828	1-213-149-00	METAL OXIDE 3.3K 5% 1W F	
IC804	8-759-345-38	IC HD14538BP		R829	1-213-149-00	METAL OXIDE 3.3K 5% 1W F	
<u>COIL</u>				R830	1-247-855-00	CARBON 10K 5% 1/6W	
L800	1-408-242-00	MICRO INDUCTOR 10MMH		R831	1-247-855-00	CARBON 10K 5% 1/6W	
L802	1-408-403-00	MICRO INDUCTOR 3.3UH		R832	1-247-851-00	CARBON 6.8K 5% 1/6W	
L803	△ 1-459-370-11	COIL, FERRITE (HLC)		R833	1-247-863-00	CARBON 22K 5% 1/6W	
L804	△ 1-459-597-11	COIL, VARIABLE		R834	1-247-859-00	CARBON 15K 5% 1/6W	
L805	1-459-403-00	COIL (WITH CORE)		R835	1-247-855-00	CARBON 10K 5% 1/6W	
L806	1-408-423-00	MICRO INDUCTOR 150UH		R836	1-247-869-00	CARBON 39K 5% 1/6W	
L807	1-459-595-11	COIL, CHOKE		R837	1-247-831-00	CARBON 1K 5% 1/6W	
L810	1-407-365-00	COIL, CHOKE		R838	1-247-824-00	CARBON 510 5% 1/6W	
<u>TRANSISTOR</u>				R839	1-247-852-00	CARBON 7.5K 5% 1/6W	
Q800	8-729-245-83	TRANSISTOR 2SC2458		R840	1-247-863-00	CARBON 22K 5% 1/6W	
Q801	△ 8-729-201-61	TRANSISTOR 2SC2555-J		R842	1-247-855-00	CARBON 10K 5% 1/6W	
	*4-363-404-00	HOLDER, IC; Q801		R843	1-247-865-00	CARBON 27K 5% 1/6W	
	4-363-414-00	SPACER, MICA; Q801		R844	1-247-817-00	CARBON 270 5% 1/6W	
Q802	8-729-201-XX	TRANSISTOR 2SC3075		R845	△ 1-212-368-61	METAL OXIDE 4.7 5% 1W F	
Q803	8-729-245-83	TRANSISTOR 2SC2458		R846	1-213-138-00	METAL OXIDE 390 5% 1W F	
Q804	8-729-245-83	TRANSISTOR 2SC2458		R847	1-213-138-00	METAL OXIDE 390 5% 1W F	
Q805	8-729-245-83	TRANSISTOR 2SC2458		R848	1-213-139-00	METAL OXIDE 470 5% 1W F	
Q806	8-729-245-83	TRANSISTOR 2SC2458		R849	1-247-848-00	CARBON 5.1K 5% 1/6W	
Q807	8-729-204-83	TRANSISTOR 2SA1048GR		R850	1-247-855-00	CARBON 10K 5% 1/6W	
Q808	8-729-245-83	TRANSISTOR 2SC2458		R851	1-247-855-00	CARBON 10K 5% 1/6W	
Q809	△ 8-729-133-41	TRANSISTOR 2SC2334-M		R852	1-247-036-11	CARBON 330 5% 1/8W F	
<u>RESISTOR</u>				R853	1-247-831-00	CARBON 1K 5% 1/6W	
R800	1-247-855-00	CARBON 10K 5% 1/6W		R855	1-215-434-00	METAL 3.6K 1% 1/6W	
R801	1-247-850-00	CARBON 6.2K 5% 1/6W		△ R856		METAL 1/6W	
R802	1-247-855-00	CARBON 10K 5% 1/6W		△ R859		METAL 1/6W	
R803	1-247-877-00	CARBON 82K 5% 1/6W		R860	1-247-847-00	CARBON 4.7K 5% 1/6W	
R804	1-247-857-00	CARBON 12K 5% 1/6W		R861	1-247-847-00	CARBON 4.7K 5% 1/6W	
R805	1-247-831-00	CARBON 1K 5% 1/6W		R862	1-247-867-00	CARBON 33K 5% 1/6W	
R807	1-247-851-00	CARBON 6.8K 5% 1/6W		R863	1-247-831-00	CARBON 1K 5% 1/6W	
R808	1-247-851-00	CARBON 6.8K 5% 1/6W		R864	1-247-879-00	CARBON 100K 5% 1/6W	
R809	1-247-827-00	CARBON 680 5% 1/6W		R866	1-247-855-00	CARBON 10K 5% 1/6W	
R810	1-247-827-00	CARBON 680 5% 1/6W		R867	1-215-433-00	METAL 3.3K 1% 1/6W	
R811	1-247-827-00	CARBON 680 5% 1/6W		R868	1-247-871-00	CARBON 47K 5% 1/6W	
R812	△ 1-206-648-61	METAL OXIDE 220 5% 2W F		R869	1-247-871-00	CARBON 47K 5% 1/6W	
R813	1-212-360-00	METAL OXIDE 1 5% 1W F		R870	1-215-469-00	METAL 100K 1% 1/6W	
				R871	1-247-895-00	CARBON 470K 5% 1/6W	
				R872	1-247-889-00	CARBON 270K 5% 1/6W	
				R873	1-247-831-00	CARBON 1K 5% 1/6W	
				R874	1-247-847-00	CARBON 4.7K 5% 1/6W	

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DA HA HB

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
R876	1-215-427-00	METAL 1.8K 1% 1/6W				TRANSISTOR	
R880	1-215-452-00	METAL 20K 1% 1/6W					
✱R881	1-215-441-00	METAL 6.8K 1% 1/6W		Q501	8-729-245-83	TRANSISTOR 2SC2458	
R882	1-215-441-00	METAL 6.8K 1% 1/6W				RESISTOR	
R883	1-247-863-00	CARBON 22K 5% 1/6W		R501	1-247-819-00	CARBON 330 5% 1/6W	
R884	1-247-860-00	CARBON 16K 5% 1/6W		R502	1-247-865-00	CARBON 27K 5% 1/6W	
R885	1-247-852-00	CARBON 7.5K 5% 1/6W		R503	1-247-883-00	CARBON 150K 5% 1/6W	
R886	1-247-852-00	CARBON 7.5K 5% 1/6W		R504	1-247-867-00	CARBON 33K 5% 1/6W	
R888	1-247-847-00	CARBON 4.7K 5% 1/6W		R505	1-247-887-00	CARBON 220K 5% 1/6W	
R890	1-247-831-00	CARBON 1K 5% 1/6W		R506	1-247-867-00	CARBON 33K 5% 1/6W	
R891	1-247-851-00	CARBON 6.8K 5% 1/6W		R507	1-247-873-00	CARBON 56K 5% 1/6W	
R892	1-247-839-00	CARBON 2.2K 5% 1/6W		R508	1-247-854-00	CARBON 9.1K 5% 1/6W	
R893	1-247-837-00	CARBON 1.8K 5% 1/8W F		R509	1-247-891-00	CARBON 330K 5% 1/6W	
R894	1-247-807-00	CARBON 100 5% 1/6W		R510	1-247-829-00	CARBON 820 5% 1/6W	
		VARIABLE RESISTOR		R511	1-247-831-00	CARBON 1K 5% 1/6W	
RV800	1-226-772-00	RES, ADJ, METAL GLAZE 4.7K		R512	1-247-163-00	CARBON 22K 5% 1/4W	
RV801	1-226-772-00	RES, ADJ, METAL GLAZE 4.7K				VARIABLE RESISTOR	
RV802	1-228-720-00	RES, ADJ, CERAMIC CARBON 1K		RV501	1-230-760-11	RES, VAR, CARBON 1K	
RV803	1-228-717-00	RES, ADJ, CERAMIC CARBON 220		RV502	1-230-761-11	RES, VAR, CARBON 20K/1K	
RV804	1-224-249-XX	RES, ADJ, METAL GLAZE 1K		RV503	1-230-711-11	RES, VAR, CARBON 20K	
RV805	1-223-102-00	RES, ADJ, WIREWOUND 100		RV504	1-230-760-11	RES, VAR, CARBON 1K	
RV806	1-228-727-00	RES, ADJ, CERAMIC CARBON 47K		RV505	1-230-762-11	RES, VAR, CARBON 20K	
RV807	1-226-702-00	RES, ADJ, METAL GLAZE 2.2K		RV506	1-230-710-11	RES, VAR, CARBON 10K	
RV808	1-226-703-00	RES, ADJ, METAL GLAZE 10K		RV507	1-230-710-11	RES, VAR, CARBON 10K	
		RELAY		RV508	1-226-703-00	RES, ADJ, METAL GLAZE 10K	
RY800	1-515-380-00	RELAY		RV509	1-226-772-00	RES, ADJ, METAL GLAZE 4.7K	
		TRANSFORMER				THERMISTOR	
T800	1-437-082-11	HDT		TH501	1-800-944-00	THERMISTOR TH-4700	
T802	1-437-081-11	TRANSFORMER, CDT				*****	
		*****				*1-614-495-11	HB BOARD
		*1-614-494-11	HA BOARD			*****	
		*****				*4-374-809-01	HOLDER (3 GANG), LED
		CAPACITOR				DIODE	
C501	1-123-332-00	ELECT 47MF 20% 25V		D502	8-719-812-32	DIODE TLY123	
C502	1-101-004-00	CERAMIC 0.01MF 50V		D503	8-719-812-32	DIODE TLY123	
		DIODE		D504	8-719-812-32	DIODE TLY123	
D501	8-719-911-19	DIODE 1SS119				CONNECTOR	
		CONNECTOR		HB2	*1-564-450-11	PLUG, CONNECTOR (2.5MM) 2P	
HA1	*1-564-451-11	PLUG, CONNECTOR (2.5MM) 3P				SWITCH	
HA2	*1-564-452-11	PLUG, CONNECTOR (2.5MM) 4P		S501	1-554-118-00	SWITCH, PUSH (1 KEY)	
HA3	*1-564-450-11	PLUG, CONNECTOR (2.5MM) 2P		S502	1-554-118-00	SWITCH, PUSH (1 KEY)	
HA4	*1-564-452-41	PLUG, CONNECTOR (2.5MM) 4P		S503	1-554-118-00	SWITCH, PUSH (1 KEY)	
HA5	*1-564-452-41	PLUG, CONNECTOR (2.5MM) 4P		S504	1-554-118-00	SWITCH, PUSH (1 KEY)	
HA6	*1-564-453-11	PLUG, CONNECTOR (2.5MM) 5P					
HA7	*1-564-453-11	PLUG, CONNECTOR (2.5MM) 5P					

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The components identified by shading and mark Δ are critical for safety. Replace only with part number specified.

X

Ref.No.	Part No.	Description	Remark
	*1-614-496-11	X BOARD *****	
	*4-337-424-00	HOLDER (L), LED	
		DIODE	
D680	8-719-812-33	DIODE TLG123A	

		MISCELLANEOUS *****	
	A 1-451-265-11	DEFLECTION YOKE (SY-167)	
	1-452-032-00	MAGNET, DISK; 10MM ø	
	1-452-094-00	MAGNET, ROTATABLE DISK; 15MM ø	
	1-452-126-11	MAGNET	
	1-507-465-00	JACK, POWER OUTSIDE	
	A 1-509-547-11	3P INLET	
L901	A 1-426-043-12	COIL, DEGAUSSING	
S901	A 1-570-200-11	SWITCH, PUSH (AC POWER)(1 KEY)	
S902	A 1-516-046-11	SWITCH, SLIDE	
SP901	1-502-509-00	SPEAKER	
T801	A 1-439-358-11	TRANSFORMER ASSY, FLYBACK	
Y901	A 8-737-151-05	CRT (A2QJKU10X)	

		ACCESSORIES AND PACKING MATERIALS *****	
Part No.	Description	Remark	
A 1-551-812-11	CORD, POWER		
3-548-372-00	BAG, POLYETHYLENE		
4-374-831-01	HOOD (VF-501)		
4-374-840-01	INDIVIDUAL CARTON		
4-374-848-01	CUSHION (UPPER) (ASSY)		
4-374-849-01	CUSHION (LOWER) (ASSY)		
4-482-062-21	MANUAL, INSTRUCTION		
4-491-213-22	INSTRUCTION		

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88A

The components identified by shading and mark A are critical for safety. Replace only with part number specified.

HARDWARE NOMENCLATURE

Screw:

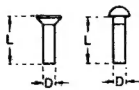
P 3 x 10

L: Length in mm
D: Diameter in mm

Type of head

Indicated slotted-head only.

Unless otherwise indicated, it means cross-recessed head (Phillips type).



Nut, Washer, Retaining ring:

N 3

Diameter of usable screw or shaft

Reference designation

Reference Designation	Shape	Description	Remarks
SCREWS			
P		pan-head screw	binding-head (B) screw for replacement
PWH		pan-head screw with washer face	binding-head (B) screw and flat washer for replacement
PS PSP		pan-head screw with spring washer	binding-head (B) screw and spring washer for replacement
PSW PSPW		pan-head screw with spring and flat washers	binding-head (B) screw and spring and flat washers for replacement
R		round-head screw	binding-head (B) screw for replacement
K		flat-countersunk-head screw	
RK		oval-countersunk-head screw	
B		binding-head screw	
T		truss-head screw	binding-head (B) screw for replacement
F		flat-fillister-head screw	
RF		fillister-head screw	
BV		brazier-head screw	

Reference Designation	Shape	Description	Remarks
SELF-TAPPING SCREWS			
TA		self-tapping screw	ex: TA, P 3 x 10
PTP		pan-head self-tapping screw	binding-head self-tapping (TA, B) screw for replacement
PTPWH		pan-head self-tapping screw with washer face	binding-head self-tapping (TA, B) screw and flat washer for replacement
PTTWH		pan-head thread-rolling screw with washer face	binding-head (B) screw and flat washer for replacement
SET SCREWS			
SC		set screw	
SC		hexagon-socket set screw	ex: SC 2.6 x 4, hexagon socket
NUT			
N		nut	
WASHERS			
W		flat washer	
SW		spring washer	
LW		internal-tooth lock washer	ex: LW3, internal
LW		external-tooth lock washer	ex: LW3, external
RETAINING RINGS			
E		retaining ring	
G		grip-type retaining ring	